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ABSTRACT

To achieve universal primary education by the year 2000, the Sudanese government found that it would have to do substantial research into the varying local conditions affecting the implementation of national educational programs. Two steps that could help ensure the effectiveness of national efforts are (1) involving local and regional personnel in planning the application of national policies at the local level and (2) gathering and using local information. Microplanning of this type--with its research component called "school mapping"--was a concept with which the International Institute for Educational Planning (IIEP) had been working, so the Sudanese Ministry of Education called on IIEP to help organize a pilot training program in school mapping in its White Nile province. This document introduces the concepts behind, objectives of, participants in, preparation for, content of, and reactions to the 3-week course conducted jointly by Sudan and the IIEP in Omdurman in January 1983. Materials used in the training exercises make up the bulk of the document. Appendixes include a closing speech to participants by the Sudanese Minister of Education and Guidance, a list of the participants, the schedule followed, an evaluation questionnaire, and a questionnaire for surveying primary and intermediate schools. (PGD)

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ED252972

Intensive training course on microplanning and school mapping

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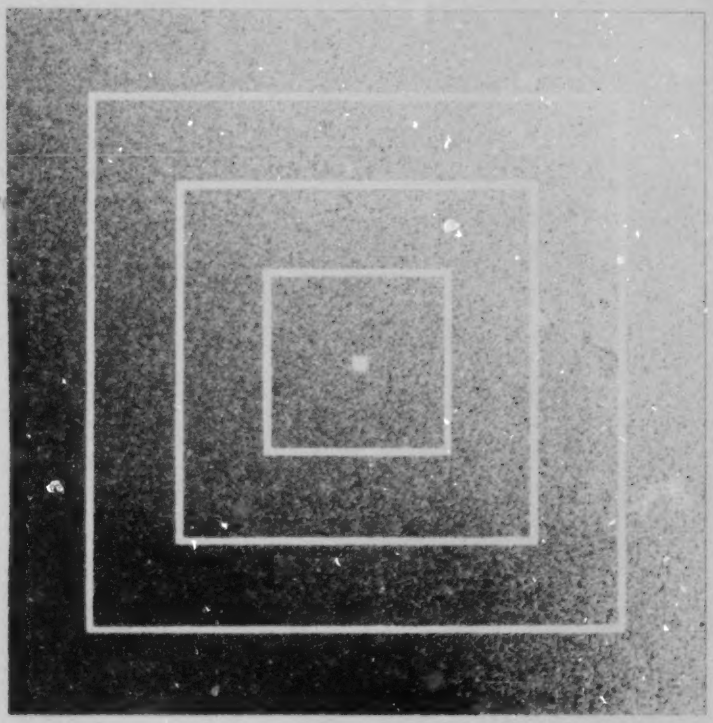

Omdurman, Democratic Republic of Sudan
8–26 January 1983

EA 017 488

International Institute for Educational Planning
(established within the framework of Unesco)

In collaboration with the Ministry of Education and Guidance, Sudan

Intensive training course on microplanning and school mapping

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PART I

INTRODUCTION

INTRODUCTION

After two decades of educational planning practices, the hopes placed in the development of education have not been fulfilled, or have been partly realized. The rapid growth in enrolments at all levels of education have not led automatically to a reduction of social inequalities nor even of purely educational inequalities. Educational objectives have not been implemented in many cases and scarce available resources have not been used in the most efficient way. Finally, education is often accused of being irrelevant to the needs of local communities and to development.

Many reasons could explain this state of affairs. Apart sometimes from the lack of political commitment to alter the situation and to change it, certain shortcomings in the methodology of educational planning done only at the central level and moulded in a uniform and general setting have often been underlined as being partly responsible for these results. These shortcomings are:

- The insufficient knowledge of the situation prevailing in various regions and zones. The lack of a thorough diagnosis of factors governing educational demand, environmental conditions, characteristics of population to be served have led to the definition of objectives, content and teaching methods irrelevant to the needs of certain regions and zones.

- The insufficient importance attached to the way decisions could be implemented in the field; the concentration on the preparation phase of educational plans and the lack of administrative support structures and financial means have led to the non-implementation of policy objectives.

- The lack of participation on the part of regional and local level personnel in the planning process.

These limitations led to an increasing interest for microplanning - of which school mapping is a major component - as an indispensable complement to macroplanning of education. This microplanning approach (or school mapping) is applied at the regional or subregional level; it starts from a very detailed analysis of the coverage of the educational system and of the teaching/learning conditions in each region or sub-region before making any suggestions or proposals for the future.

It aims at equalizing educational opportunities and teaching conditions for pupils from different geographical zones and allows the rationalization of human, material and financial resources. Thus, it requires the direct involvement of regional and sub-regional education officers in the preparation and implementation of educational plans and projects, as it implies also some participation of the various parties involved in the decision-making process (local authorities, teachers, parents, etc.).

Based on the results of its research programme, the International Institute for Educational Planning has organized, since 1974, various intensive courses on school mapping : two courses in Paris (1974 and 1975) followed by various regional, sub-regional or national intensive courses and seminars in Latin America (Colombia, Venezuela, Mexico and Ecuador, Asia (Indonesia and Thailand), Arab States (Yemen Arab Republic, Morocco, Oman) and Africa (Cameroon, Nigeria, Tanzania). The Sudanese Ministry of Education and Guidance approached the IIEP requesting the organization of a national course to train the various regional and central education officers on the techniques of school mapping and microplanning. This training course constitutes in fact a follow-up activity to the study undertaken jointly in 1981-82 by the IIEP and the Sudanese Ministry of Education and Guidance on planning education at the local level in the White Nile Province for the purpose of universalizing primary education in the Sudan. It was thus decided after the completion of the study that IIEP and the Ministry of Education and Guidance would jointly organize a three-week course for the above-mentioned personnel. The course was held in Omdurman some 10 kms from Khartoum, from 8 to 26 January 1983. Mr Habib Hajjar was in charge of its preparation and organization on behalf of the IIEP, and Mr El-Rayah Talballa, Director of the Planning Unit at the Ministry of Education and Guidance, was responsible of its organization on behalf of the Sudanese Government.

Objectives of the course

Since 1977 the Government of Sudan has embarked on a long-term objective of universalizing primary education in the whole country by the end of 1990. Existing studies however estimate the present enrolment rate at 39% in 1982. Achieving UPE within this short period of time will therefore require a very big effort in terms of school construction, training of teachers, production of teaching materials, etc.

Due to the extremely severe budgetary constraints under which the country operates and to many other factors, the Government realized the necessity to hold a national conference on education in December 1982 and to adopt, as far as primary education is concerned, the two following resolutions :

1) postponement of UPE to the year 2000,

2) generalization of the microplanning and school mapping approach at the regional and sub-regional level in harmony with the new policy of regionalization and decentralization.

With reference to these elements of the Sudanese educational policy and planning, and in line with the methodological purposes of the case study undertaken in the White Nile Province, the training course had the main following objectives :

a) to acquaint the participants with the microplanning and school mapping approach,

b) to help them acquire the appropriate concepts and techniques in microplanning and school mapping on the basis of the abovementioned case study,

c) to help them identify the various factors needed to be taken into account when planning for the preparation and implementation of a school map project, with a view to generalizing the microplanning approach all over the country.

As a result,the participants worked on various alternative assumptions concerning the expansion of the primary school system up to 1990. All the alternatives implied the opening of a large number of schools, but they also implied a better utilization of scarce available resources, a reconsideration of the extent of reliance on communities to provide resources for education in relation to the poorest areas, and more specifically a change in the relations between the different levels of decision-making (central, regional, provincial and local) for a major role to be played by the sub-national levels.

Participants

With respect to the new policy of regionalization and decentralization of educational administration, the elaboration of the school map for primary level of schooling is the responsibility of the regional level relayed at the provincial and district level by appropriate administrative structures. In view of this, it was agreed that the Ministry of Education and Guidance would proceed with the selection of some 40 participants

representing the regional level of educational planning and administration, the central unit of educational planning and the general directorate of literacy and adult education in the Ministry of Education. A total of 33 participants attended the course instead of 40, the representatives of the southern region being unable to attend for reasons apparently related to transport and communication difficulties.

A detailed list of participants is attached to this report (Annex III). Each candidate was sent a detailed programme of the course, together with a copy of the IIEP publication "Planning the location of schools" by J. Hallak and a note explaining the data each participant should bring with him for the preparation of regional projects.

Preparation, organization and financing of the course

Based mainly on the microplanning case study undertaken in the While Nile Province in 1981-82, the simulation exercises for the course were prepared by H. Hajjar at the IIEP in Paris.

Inaugurated by Mr Mohammad Kamal Badr, Undersecretary of the Ministry of Education and Guidance, the course took place at the Teacher Training Institute for intermediate level in Omdurman some 10 kms from Khartoum. A large seminar room was available for plenary sessions and two smaller rooms for working group sessions and storage of teaching materials and stationery. The secretarial and reproduction services needed during the course were provided at the General Directorate of Strategy and Planning in the Ministry of Education, Khartoum.

Initially the provisional programme foresaw two working sessions per day (8 am - 13 pm and 5 pm - 7 pm) with a long break for lunch and rest. This daily timetable has been modified at the request of the participants in the way of one long session per day from 8 am to 3 pm with one hour break for lunch and rest. In spite of its heaviness this formula proved good and saved participants and organizers the trouble of undergoing the daily transport and communication difficulties. This formula was also made possible thanks to the system of quick lunch provided by the Ministry of Education to all participants and responsibles in the course.

Some 20 participants coming from the various regions of the country were accommodated in the dormitories of the Teacher Training Institute.

The IIEP financed all international costs (travel and per diem for staff) together with the costs related to the preparation and reproduction

of teaching materials. The dispatch of these teaching materials (lectures and books) to Khartoum was made possible thanks to the cooperation of the Permanent Delegation of Sudan to Unesco. The Sudanese Ministry of Education and Guidance bore all the other costs : transport and per diem for all participants, accommodation, feeding, secretarial services and local reproduction, transportation facilities to staff members in Khartoum and Omdurman as well as to and from the airport, etc.

Programme and content of the course

The course consists of three basic components (the detailed programme is shown in Annex IV) :

- Lectures/discussions during which the basic concepts and techniques used in school mapping and microplanning were presented and discussed. A detailed outline of each lecture was distributed to each participant in advance.

- Practical exercises based essentially on the results of the case study mentioned above. These exercises covered the various aspects of diagnosis (enrolments, teachers, facilities..) as well as the projection of requirements and preparation of a prospective school map. The discussions which took place after each practical exercise were an efficient means to make sure of the attainments of participants and to deepen the techniques of analysis and interpretation of results. The exercises were carried out in six working groups. A complete set of these exercises is included in Part II of this report.

- Preparation of regional projects : each participant was asked to bring with him detailed information on one district of his region in order to start a project for the introduction of school mapping. The participants were regrouped into six groups to start this activity. However, most of them were not able to collect, before the beginning of the course, the necessary data (maps, information on schools, demographic data..) because they had not been informed sufficiently in advance. On the whole, they were able to start with the choice of the pilot zone (district), the identification of necessary data for diagnosis and their sources, the preparation of tables for computing indicators of diagnosis and finally a work schedule for the implementation of this activity.

One working day was devoted to visit primary and secondary schools in the neighbourhood, in order to test the survey instruments and to observe the problems related to the filling of questionnaires, the ambiguity of questions posed and the reliability of information collected. This working day was preceded by a detailed discussing session to which all the principals of primary and secondary schools to be visited, were conveyed.

Staffing of the course

On behalf of the IIEP, Habib Hajjar, Ta Ngoc Châu and Françoise Caillods were responsible for the teaching and tutoring of participants. On the Sudanese side, Mr Talballa, former IIEP trainee and Head of the Central Planning Unit, played a vital role in the organization of the course. On the other hand, Mr Mohammad Kamal Badr, Under-Secretary of the Ministry of Education and Guidance gave, at the beginning of the course, a lecture/presentation on the Sudanese educational policy, planning and administration which allowed for a very lively discussion on the educational policy of Sudan and the issues at stake. The lecture devoted to the presentation of the pilot zone, which was to be given by a member of the local team who conducted the survey, was cancelled because of the non-availability of this specialist.

The working language of the course was English. However, it seemed necessary on various occasions to resort to Arabic in order to clarify better the concepts and make them understandable especially for those whose English was not fluent.

Professor Osman Sayyid Ahmad, Minister of Education and Guidance, closed officially the course on Tuesday evening 25 January 1983 and delivered certificates of attendance to all participants. A copy of his speech can be found in Annex I.

Evaluation of the course

A few days before the end of the course a questionnaire was distributed to participants, asking them to evaluate the different phases of the course and its preparation, in order to suggest improvements for similar courses in the future. This written evaluation was complemented by an oral evaluation on the last day of the course. The results of the questionnaire are included in Annex V. The following main conclusions can be drawn from the remarks in general :

a) Preparation of the course

The majority of the participants mentioned that the information material was not sent sufficiently in advance for them to be able to prepare for the course. This material comprised, as indicated before, the IIEP publication on "Planning the location of schools" by J. Hallak, the provisional programme of the course and an information note on data to be collected for the preparation of regional projects. Nearly all the participants were notified of their admission to the course a few days only before its commencement and did not, therefore, have enough time to collect the data required. Consequently, they felt that they should be informed of their admission to the course at least one month (51.6%), two months (25.8%) or even three months and more (16.2%) before its beginning.

b) The course itself

- On the whole the course was judged as good (41.9%) or very good (54.8%).

- The lectures/discussions and practical exercises were very much appreciated and their content was found to be very useful by respectively 74.2% and 77.4% of the participants.

- The majority of participants (75.9%) were of the opinion that not enough time was devoted to the preparation of regional projects.

- 51.7% of participants felt that more time should be attributed to the cost concepts.

- 61.4% of participants found the course to be short or even too short (19.4%). Consequently, the majority felt that four weeks at least (38.7%) or even eight weeks (48.4%) should be devoted to such a course.

c) Future courses

- 58.1% of participants would like future similar courses to be organized on a regional base, inviting participants from Arab and East African countries.

- Other topics proposed for the organization of future courses included : educational management and administration, literacy and adult education, curriculum development, costing and financing, teacher training, etc.

- In order to keep in touch with the Institute, many participants suggested that we send them our list of publications and keep them informed of similar training courses and seminars the IIEP might organize in the future. The organization of a follow-up activity to this course was also proposed.

Conclusions

The course took place at a moment when the Sudan is proceeding to the setting of its new regionalization and decentralization policy. Having been organized after the national conference on education (December 1982) which adopted a resolution concerning the generalization of the microplanning and school mapping approach to implement UPE by the year 2000 (instead of 1990), the course allowed a very enriching exchange of views and discussions among representatives of different administrative levels as regards the planning process at the central and regional levels.

- As a follow-up to this course the Directorate of planning in the Ministry of Education and Guidance is planning to hold a number of other meetings in order to evaluate the work that the participants have carried out in their respective regions. The IIEP might be requested to participate in one of these meetings.

PART II

THE INTRODUCTION OF SCHOOL MAPPING AND MICROPLANNING IN THE WHITE NILE PROVINCE - SUDAN

Working Document

IIEP/ITC36/Data Bank
Paris, 27 December 1982
Original: English

Intensive Course on Microplanning and School Mapping
Khartoum, Democratic Republic of Sudan
(8 - 26 January 1983)

DATA BANK ON THE SUDAN

This document has been prepared for the participants in the Intensive Training Course on Microplanning and School Mapping, organized in Khartoum, Sudan, by the Ministry of Education and Guidance of the Sudan and the International Institute for Educational Planning (Unesco), Paris

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Table 1. Enrolment in primary schools (public and private) in the Sudan 1980/1981 (by province and sex)

Province	Enrolment			Population (7-12)		
	Boys	Girls	Both sexes	Boys	Girls	Both sexes
1. Northern	39311	37013	76324	52489	51235	103674
2. Nile	55850	49075	104925	70386	68752	139120
3. Khartoum	111760	102183	213943	163451	152244	315695
4. Gezira	148788	125625	274413	221973	203054	425027
5. While Nile	53898	37673	91571	151200	137620	288820
6. Blue Nile	59065	31445	90510	112560	102450	215010
7. Kassala	63460	43216	106676	184925	158362	343287
8. Red Sea	20483	14054	34537	90820	74431	165251
9. North Kordofan	71550	41073	112623	184309	183852	368161
10.South "	56192	26764	82956	136060	135725	271785
11.North Darfour	48954	20780	69734	133971	124757	258728
12.South "	43251	19379	62630	171190	174498	345688
13.Jonglei	9523	1458	10981	27310	23010	50320
14.Upper Nile	16466	4984	21450	55224	46528	101752
15.Lakes	9371	1571	10942	51140	43064	94204
16.Bahr El-Gazal	17307	4342	21649	93611	78826	172437
17.East Equatoria	39714	19779	59493	52483	44057	96540
18.West "	12548	5635	18183	25981	21798	47779
All Sudan	878051	586079	1464130	1979015	1824263	3803278

Source: Educational Statistics for the year 1980/81 - Ministry of Education and Guidance, Khartoum.

Table 2. Growth of enrolment (by level) for the period 1970/71 - 1980/81 in the Sudan

Sch.Yr / Level	Primary	Intermediate	Sec. (Academic)	Sec. (Techn.)	Higher
1970/71	749049	53572	19837	1974	N.A.
1971/72	883533	68304	23871	2876	"
1972/73	1008703	85978	29563	3842	16328
1973/74	1036840	115734	34016	4907	18762
1974/75	1099680	126497	37672	6515	22069
1975/76	1145415	139179	39402	6846	21324
1976/77	1207661	147427	43943	8297	20887
1977/78	1284513	168724	52213	8809	24117
1978/79	1504824	214419	62056	11715	26883
1979/80	1435127	258606	130395	12690	27016*
1980/81	1464130	278767	115692	15302	N.A.
Average growth rate	6,93%	17,92%	19,3%	23,6%	7,5%

x This number does not include the students who are studying abraod in 1979/80 and who accounted for more than 20 000.

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Table 3. Transition rates to intermediate and higher secondary education in the Sudan 1980/81

School year	Intermediate			Secondary (Academic)		
	Enrolment in primary grade VI (1979/80)	Enrolment in grade I inter-mediate (1980/81)	Transition rate	Enrolment grade III inter-mediate (1979/80)	Enrolment in grade I secondary (1980/81)	Transition rate
1980/81	176783	98585	55,8	77283	32731	42,3

Table 4. Number of boarders by level of education in the Sudan 1980/81

Level / Sch.Yr	Primary			Intermediate			Secondary (Academic)		
	Total enrol-ment	N° of boarders	%	Total enrol-ment	N° of boarders	%	Total enrol-ment	N° of boarders	%
1980/81	1464130	117130	8,0	278767	59935	21,5	115692	32162	27,8

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Table 5. Budgetary cost per pupil in the levels (Prim.,Inter., & Sec.) 79/1980 - in Sudanese Pounds

Secondary Level				Inter. Level		Primary level		Province
Technical		Academic						
Boarder	Day Stud.	Boarder	Day Stud.	Boarder	Day Stud.	Boarder	Day Stud.	
418.4	103.4	203.8	108.8	202.1	98.9	132.5	45.2	Northern
310.1	190.2	205.3	121.7	180.3	100.2	128.1	48.4	Nile
328.1	182.4	348.9	151.6	278.2	59.7	196.4	25.9	Khtm.
347.4	183.6	247.6	156.7	184.9	90.2	114.1	26.9	Gezira
359.1	189.5	204.8	111	222.8	76.3	101.8	31.2	W.Nile
-	-	254.3	163.8	159.5	66.5	117.6	33.4	B.Nile
387.7	192.3	269.4	145.7	194.1	70.8	130.4	32.9	Kassala
369.8	185.9	431.3	241.8	294.8	107.9	148.8	43.6	Red Sea
297.9	193.1	189.2	115.9	125.2	73.5	80.8	35	N.Kordofan
-	-	266.3	127.7	197.8	92.4	100.2	30.5	S.Kordofan
542.1	189.7	442.3	210.6	241.4	115.8	105.6	45.2	N.Darfur
326.6	187.1	308.9	182.5	199.7	101.2	103.9	34.8	S.Darfur
243.9	181.7	-...	-...	-...	-...	-...	-...	S.Region
333.4	182.5	250.6	145.5	184.3	83.3	105	30.7	All Sudan

Source : Educational Statistics - Ministry of Education and Guidance, Sudan 1979/80

Table 6. Summary table of recurrent expenditure on public schools in the seven provinces 1977/78 (in Sudanese pounds)

Province	Total Expenditure	Cost/Day Pupil					
		Primary	Junior Sec.	Ac.Sec. Schools	Primary	Junior Sec.	Academic sec. schools
All Sudan	59 917 010 (1)	26.620	78 650	152 460	64 032	156 078	213 440
The 7 Provinces	21 845 725	27.210	59 643	158 841	51 279	138 131	249 396
Blue Nile	1 930 567	16.035	33 005	73 867	(3)	113 230	153 211
Red Sea	1 411 033	22.817	49 643	117 518	57 013	178 286	196 298
South Kordofan	3 072 208	27.679	35 636	77 090	54 645	108 063	142 467
North Kordofan	2 015 719	44.978	49 866	54 674	93 342	101 609	96 108
North Darfur	3 776 663	48.060	76 544	78 093	56 686	150 084	149 613
Khartoum	8 313 198	22.058	80 105	233 172	174 983	300 079	360 126
Equatoria	1 326 335	43.909	46 830	(3)	75 821	104 468	139 350

(1) This is the amount remitted by the Central Govt. to the Local Govt. for general education (2) All day-pupils (3) All boarders cost per pupils for the seven provinces are averaged for them.

Source : Survey of educational expenditure on public education in selected provinces - Ministry of National Planning and Ministry of Education, Khartoum 1978.

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EXERCISES

EXERCISE N° I

COLLECTION OF DATA

Given the information available in the file corresponding to your region, indicate :

a) What kind of data could be collected easily both at the national and regional levels? (Specify administrative components).

b) What kind of data requires special surveys :

- on pupils;
- on teachers;
- on school premises;
- others (specify).

	Available			Not available		
	Ministry of Education	Other Ministries (Specify)	Local Administration (Specify)	Survey on Pupils	Survey on Schools	Others (Specify)
1. Environment						
2. Demography						
3. Education						
(a) Enrolment						
(b) Teachers						
(c) Curriculum						
(d) Classrooms & equipment						
(e) Cost and financing						
4. Other						

EXERCISE N° II

IDENTIFICATION OF HOMOGENEOUS ZONES

The district used for the pilot exercise is called the district of Ed-Dueim. It is located at the North-Western part of the White Nile Province and it has 81 primary schools, 27 intermediate schools, 3 academic secondary schools and one technical secondary school.

The district extends for about 100 kms from north to south and 25 kms from east to west. Its total population is estimated to be 686350 inhabitants in 1981 of whom 158 000 approximately are nomads. Ed-Dueim town the district headquarters has 36350 inhabitants in 1981 and the cities of Shabasha and Sofi have respectively 19600 and 14600 inhabitants.

There is only one highway paved road still under construction linking Ed-Dueim to Khartoum in the north. All the other roads are seasonal and the transportation network depends solely on lorries and trucks. The only railway line that links the White Nile Province to Khartoum crosses the Province from west to east at its southern part and then, through the Gezira Province at the north-east it continues to Khartoum in the north.

The predominant economic activity in the district is agriculture. Irrigated schemes are extending on the western and eastern banks of the White Nile in addition to rain cultivated land. The main crops are cotton and dura.

Recently, sugar production schemes have been established in the southern part of the Province at Asalaya and Kinana as a result of which new towns have grown up. Cattle raising is also an important part of the economic activity carried out by nomads.

The district is divided into 9 local councils : The city of Ed-Dueim, the city of Shabasha, the city of Sofi, Arashkoul, Um Rimta, Minidreep, Kereida, Wahda and Zereiga (See map 1). Due to unavailability of data concerning the population, different procedures have been used to estimate the population by district and local council. First, population data have been collected from peoples' local councils out of the lists of supplies and checked with estimates gathered from some villages and schools. Then population data for age 18 and above have been gathered from the lists of elections by councils and villages and percentages of age group 1-17 have been calculated from the 1973 Census and the surveys carried out by the Department of Statistics

in the Ministry of National Planning. Later, all data were checked with population projections prepared by the Department of Statistics. Finally, an estimation has been made concerning the school-age population using the population structure prepared also by the Department of Statistics. (See table 1).

A survey has been conducted in various primary schools and information on enrolments, teachers and facilities has been collected. It has only been possible, however, to conduct the survey in 59 schools (72,8%). Data on the remaining 22 schools has been gathered from the traditional school forms available at the Educational office of the district. The location of each school, as well as the road network is shown in map N° 1. The summary of the basic information on primary schools is presented in table N° 2.

There are 27 intermediate schools in the district of Ed-Dueim, (16 of them have been surveyed), three academic secondary schools (all of them have been surveyed) and one technical secondary school (not surveyed).

In order to make concrete suggestions and proposals for the improvement of the primary school system and the location of new primary schools in the future, it is necessary to analyze the present teaching/learning conditions in the district and to highlight the deficiencies in the system, as well as possible imbalances between schools, groups of students and zones. The analysis could be carried out by local council. However, given the relative high number of local councils within the district (the same can be said for the whole province), it would be then a lengthy process. It is therefore suggested to regroup local councils (and schools) with similar characteristics, thus identifying various zones each one having its specific problem. Within each zone, educational characteristics should be as homogeneous as possible, and between zones they should be as different as possible.

By analyzing the following criteria :

- Relief, road network and means of communications (map N° 1).
- Location and density of primary schools in the various local councils and demographic criteria (map N°1).
- Enrolment ratios in primary education.

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- Percentage of trained teachers, number of classrooms per stream..

and regrouping various local councils, identify 3 to 4 homogeneous zones. Justify your choice.

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Table 1. Total population and school-age population by local council - District of Ed-Dueim 1980/81 (estimates)

Local Council	Total population			Age 7			7-12			13-15		
	M	F	T	M	F	T	M	F	T	M	F	T
Ed-Dueim	18500	17850	36350	888	784	1672	3656	3304	6960	1075	934	2009
Shabasha	10000	9600	19600	480	421	901	1976	1777	3753	581	502	1083
Sofi	7450	7150	14600	358	314	672	1472	1323	2795	433	374	807
Arashkoul	89650	86300	175950	4303	3789	8092	17715	15974	33689	5209	4513	9722
Um Rimta	101800	98050	199850	4886	4304	9190	20116	18149	38265	5915	5128	11043
Minidreep(	122300	117700	240000	5870	5167	11037	24166	21786	45952	7106	6156	13262
Kereida (												
Wahda (												
Zereida (												
Total	349700	336650	686350	16785	14779	31564	69101	62313	131414	20312	17607	37919

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Table 2. District of Ed-Dueim - Basic data on primary schools 1980/81

Local Council	Name of school	Code N°	Type	Enrolment		N° of streams	Shifts	Teachers		Classrooms	
				Total	Girls			Total	Trained	Total	Needing maintenance
Shabasha	Shabasha-East	1	B	341	-	6	1	8	2	6	6
	Shabasha-West	2	B	345	-	6	1	9	6	6	6
	Shabasha	3	G	694	694	12	2	24	12	11	11
	Sub-total			1380	694	24		41	20	23	23
El-Sofi	El-Sofi	4	B	408	-	8	1	10	3	6	6
	El-Sofi	5	G	339	339	6	1	8	5	6	-
	Hillat Al-Abid	6	C	413	146	6	1	7	5	6	6
	Sub-total			1160	485	20		25	13	18	12
Ed-Dueim	El-Shuhada	7	B	94	-	2	1	4	4	2	-
	El-Wahda	8	B	105	-	2	1	5	2	1	-
	Ed-Dueim Pilot	9	B	556	-	11	2	20	20	6	-
	Rida El-Khalifa	10	B	315	-	6	2	6	6	6	-
	Rida Dinar	11	B	325	-	6	2	7	7	6	-
	Rida El-Zaki	12	B	314	-	6	2	6	4	6	-
	Rida Kinna	13	G	391	391	6	2	9	5	6	-
	Ed-Dueim	14	G	340	340	6	1	15	9	6	-
	" "	15	G	732	732	12	2	34	21	7	2

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Table 2 (cntd.)

Local Council	Name of school	Code N°	Type	Enrolment		N° of streams	Shifts	Teachers		Classrooms	
				Total	Girls			Total	Trained	Total	Needing maintenance
Ed-Dueim	Ed-Dueim	16	G	333	333	6	1	15	6	6	6
	"	17	G	451	451	6	2	21	9	6	-
	El-Shati	18	G	271	271	6	1	16	7	6	-
	Extension West	19	G	70	70	2	1	3	3	2	2
	Roto	20	C	503	201	10	2	18	17	4	4
	El-Talaa	21	C	328	150	6	2	11	8	6	2
	Rida El-Mahdi	22	C	361	132	6	2	7	3	3	-
	Rida Anja	23	C	417	155	6	2	7	3	6	4
	Sub-Total			5906	3226	105		204	134	85	20
Arashkoul	Arik	24	B	262	-	6	2	8	2	6	6
	Arik	25	G	239	239	6	2	10	2	6	3
	Sheikh El-Khanjar	26	C	72	34	2	1	2	2	2	2
	El-Siferaya	27	C	327	156	6	1	7	-	6	2
	Um Gidad	28	C	151	48	4	2	9	-	4	-
	Arashkoul	29	C	110	44	6	2	9	3	6	-
	Banunab	30	C	211	82	6	3	7	2	4	-
	El-Shiteib	31	C	321	138	6	1	7	3	6	6

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Table 2 (cntd.)

Local Council	Name of school	Code N°	Type	Enrolment		N° of streams	Shifts	Teachers		Classrooms	
				Total	Girls			Total	Trained	Total	Needing maintenance
Arashkoul	El-Turaa	32	B	144	-	6	1	7	4	6	6
	"	33	G	193	193	6	1	6	4	6	4
	Selake	34	C	130	39	3	1	5	3	3	3
	El-Oshera	35	C	322	135	6	1	7	3	6	4
	El-Laouta	36	C	233	85	6	1	7	4	6	3
	El-Awamra	37	C	256	98	6	1	7	3	6	4
	El-Manara	38	C	233	108	6	1	8	4	6	6
	El-Getaina	39	C	187	39	6	1	9	4	6	4
	El-Humara	40	C	114	27	2	1	4	2	2	2
	El-Halba	41	C	226	75	6	1	8	3	6	5
	Wad-Gabur	42	C	174	37	6	1	7	3	6	6
	Khur El-Mutrag	43	C	166	16	4	1	4	-	4	4
	Idd El-Oud	44	C	205	20	6	1	4	-	6	-
	Sub-Total			4276	1613	105		137	51	109	70
Um Rimta	Wad Nimir	45	B	354	-	6	2	6	3	6	6
	" "	46	G	345	345	6	1	8	3	6	-

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Table 2 (cntd.)

Local Council	Name of school	Code N°	Type	Enrolment		N° of streams	Shifts	Teachers		Classrooms	
				Total	Girls			Total	Trained	Total	Needing maintenance
Um Rita	El-Shatawi	47	C	306	107	6	1	6	-	6	4
	" "	48	"	63	23	1	1	1	-	1	-
	El-Kaddaba	49	"	505	203	7	2	9	4	7	6
	El-Alaga	50	"	480	193	6	1	5	1	6	-
	El-Etisam	51	"	145	39	6	1	6	-	6	6
	Tjammu El-Humara	52	"	150	46	6	1	6	-	6	6
	El-Sheikh Hussain	53	"	201	61	6	1	7	-	6	-
	El-Hinew	54	"	305	70	7	1	8	2	6	2
	Eid Um Ish	55	"	185	80	3	1	4	3	3	3
	Sheikh Ahmad	56	"	148	50	3	1	4	-	3	3
	Hillat El-Obid	57	"	368	108	6	1	7	4	6	6
	El-Oshara El-Garbiyya	58	"	279	127	6	1	8	2	6	6
	Shaqiri	59	"	175	60	3	1	4	3	3	2
	Gouz El-Baid	60	"	316	113	6	1	6	1	6	6
	El-Marakha	61	"	174	37	6	1	6	2	6	6
	El-Shigeg	62	"	311	112	6	1	6	3	6	6
	El-Shawa	63	"	30	10	1	1	2	2	1	1
	Sub-Total			4840	1784	97		109	33	96	69

Table 2 (cntd.)

Local Council	Name of school	Code N°	Type	Enrolment		N° of streams	Shifts	Teachers		Classrooms	
				Total	Girls			Total	Trained	Total	Needing maintenance
Minidreep	Minidreep	64	B	197	-	6	1	7	2	6	2
Wahda & Zeraiga	"	65	G	160	160	6	1	9	6	5	-
	El-Tahira	66	C	288	77	6	2	6	1	6	3
	El-Kardoud	67	"	337	127	6	1	8	1	6	6
	El-Rawda	68	"	250	111	6	2	6	-	6	-
	Abou Shibika	69	"	184	70	6	1	7	1	4	4
	Gouz Mirekfib	70	"	281	100	6	3	7	1	5	5
	El-Mikefi	71	"	303	86	6	2	8	2	6	6
	Erked Fayek	72	"	275	125	6	2	9	3	4	4
	Wakra	73	"	354	124	6	2	12	6	6	6
	Sub-Total			2629	980	60		79	23	54	36
El-Kireida	El-Kireida	74	B	271	-	6	2	9	3	6	-
	"	75	G	235	235	6	3	9	1	6	6
	Kathir Bella	76	G	215	215	5	1	11	7	5	5
	Abou Shabaka	77	C	n.a	n.a	6	1	7	4	6	6
	Adida	78	"	325	148	6	1	7	2	6	6

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Table 2 (end)

Local Council	Name of school	Code N°	Type	Enrolment		N° of streams	Shifts	Teachers		Classrooms	
				Total	Girls			Total	Trained	Total	Needing maintenance
El-Kireida	El-Dibeba	79	C	336	151	6	1	10	4	6	-
	El-Goueiz	80	"	289	126	6	1	8	4	6	-
	Mabrouka	81	"	301	133	6	1	11	2	6	3
	Sub-Total			1972	1008	47		72	27	47	26

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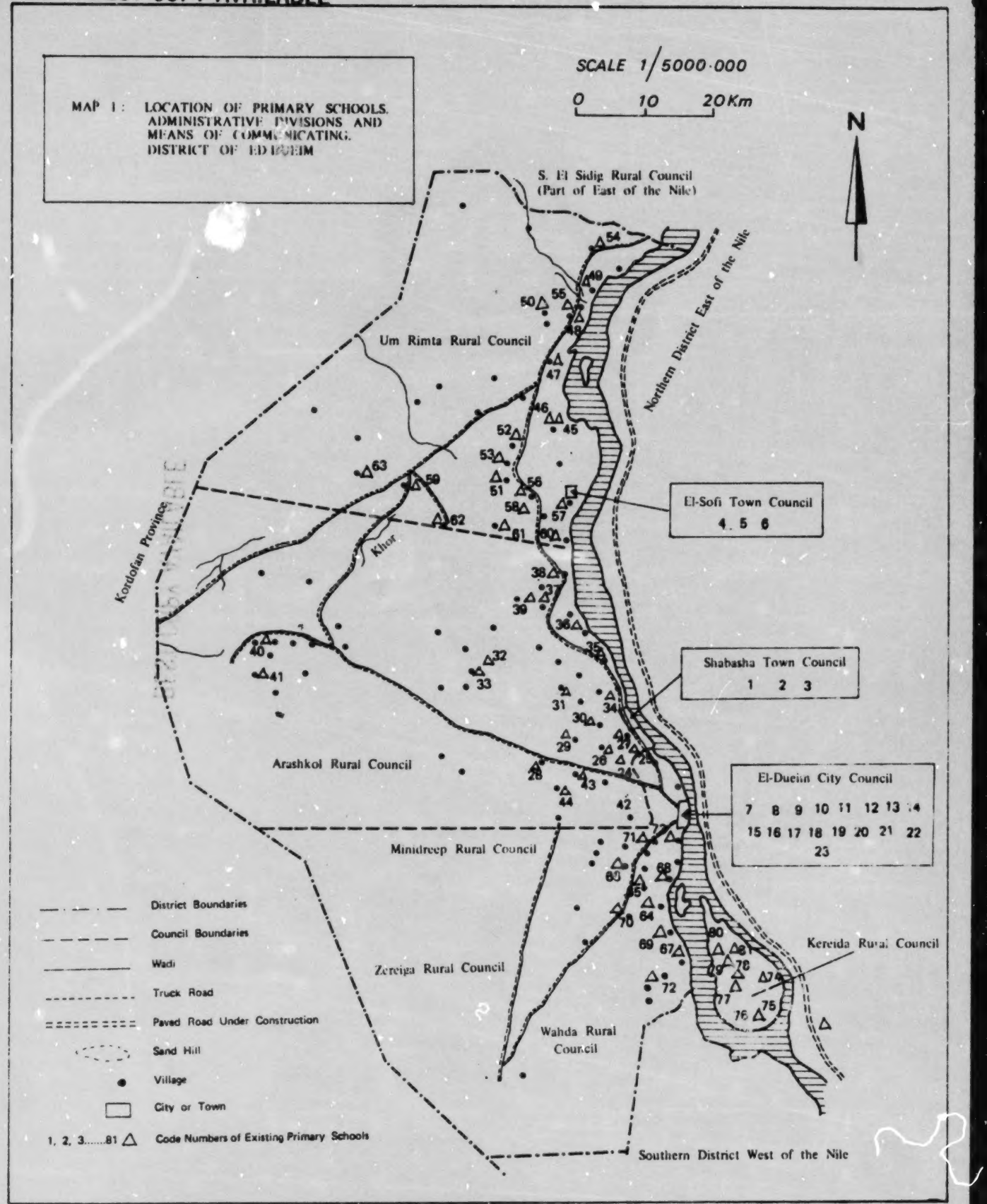

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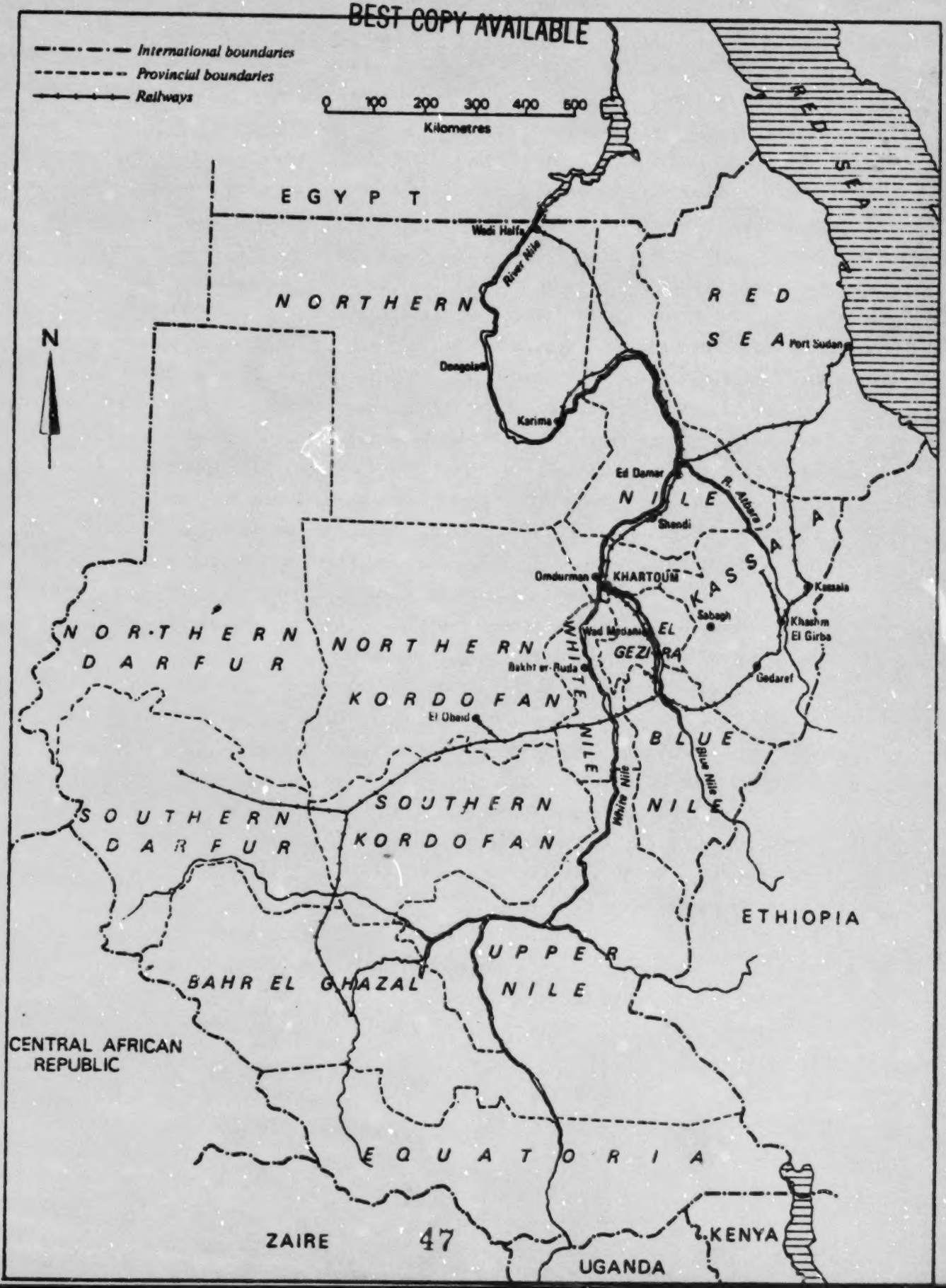

SOLUTION TO EXERCISE N° II

IDENTIFICATION OF HOMOGENEOUS ZONES

The basic map on which the various zones are to be drawn is Map N° 1, showing the administrative divisions as well as the road network and the location of primary schools.

The first criteria to be applied are relief and quality of the road network. They will allow us to identify those areas where communications are relatively easy, i.e. where access to education and organization of the educational service should be easier, and those areas where, on the contrary communication is fairly difficult. Since the main objective of the educational policy is the universalization of primary education, one criterion will be determinant when drawing up our zone boundaries : the admission rates to the first year of primary schooling or the gross enrolment rate for the whole level of primary education. Other criteria, such as percentage of trained teachers or state of classrooms (indicators of quality of the educational service), will be applied only if there is some doubt as to where to allocate any one local council.

A. Applying the criterion on relief and means of communication one can identify two zones. The first one goes from north to south along the Nile corresponding to the large agricultural area on the western bank of the White Nile, and the second one corresponds to the remaining parts in the west. In the first zone, communications are easy. In fact the paved road under construction is linking the cities on the Nile and the other settlements to the north and to the south. Apart from this, the whole zone is benefiting from the transportation system and other means of communication in use on the Nile, at least in different points and at different periods of the year. In the other zone communications are relatively more difficult : all the roads are seasonal and the transportation network depends solely on lorries, trucks and animals.

B. The demographic criterion as well as that of the density of primary schools allows us to separate out two definitely urban and semi-urban areas: the city of Ed-Dueim (17 primary schools) and the two cities of Shabasha and Sofi (3 primary schools for each) from the rest of the district.

C. If we now analyze the gross enrolment rate, three zones also seem to emerge:

. A zone corresponding to the city of Ed-Dueim, the district headquarters, where the gross enrolment rate for both sexes is about 85 per cent : schooling is relatively high, although not yet universalized.

. A zone corresponding to the two cities of Shabasha and Sofi with a comparatively low gross enrolment rate (38,8%) close to the national average (38,5%) for the whole Sudan in 1980/81.

. A third zone corresponding to the rest of the district with a very low enrolment rate (10,6%). That is in this zone where the 158 000 estimated nomads and semi-nomads are living (23% of the total population of the district).

D. The percentage of trained teachers seems to follow to some extent the same pattern between zones. The urban zone of Ed-Dueim seems to have a high percentage of trained teachers (65,7%) either coming from the Teacher Training Institutes or secondary school leavers trained on the job. This percentage falls to 50% in the two cities of Shabasha and Sofi and almost 34% in the rest of the district.

We have therefore concluded on three zones:

. An urban zone corresponding to the city of Ed-Dueim.

. A semi-urban zone corresponding to the towns of Shabasha and Sofi.

. A rural zone corresponding to the rest of the district.

A more detailed information on this third rural zone might help eventually to split it into two zones: one corresponding to the west bank of the White Nile where most of the people are settled and another one corresponding to the interior part of the district where most of the people are nomads and semi-nomads.

EXERCISE N° III

DIAGNOSIS OF ENROLMENT AT PRIMARY LEVEL

When preparing the diagnosis of enrolment at primary level of education, one should look in particular at :

- the coverage of the educational system;
- the efficiency of the educational system;
- the location of primary schools and the distances covered by pupils to go to school every day.

I. Coverage of the educational system

Table 1. Apparent admission rates by sex and zone - District of Ed-Dueim 1980/81

Zone	Population 7 years old (1981)			Enrolment in Grade 1 (1980/81)			Of whom repeaters			Apparent admission rate %		
	M	F	T	M	F	T	M	F	T	M	F	T
Urban	888	784	1672	545	602	1147	147	94	241	44,8	64,8	54,2
Semi urban	838	735	1573	224	209	433	29	17	46			
Rural	15059	13260	28319	2072	1190	3262	258	121	379			
Whole District	16785	14779	31564	2841	2001	4842	434	232	666			

Table 2. Gross enrolment rates by sex and zone - District of Ed-Dueim 1980/81

Zone	Population 7-12 (1981)			Enrolment in grades 1-6 (1980/81)			Gross enrolment rates		
	M	F	T	M	F	T	M	F	T
Urban	3656	3304	6960	2680	3226	5906	73,3	97,6	84,9
Semi-urban	3448	3100	6548	1361	1179	2540			
Rural	61997	55909	117906	8332	5385	13717			
Whole District	69101	62313	131414	12373	9790	22163			

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Table 3. Percentage of girls in primary education by zone - District of Ed-Dueim 1980/81

Zone	Total enrolment	Girls	%
Urban	5906	3226	54,6
Semi-urban	2540	1179	
Rural	13717	5385	
Whole District	22163	9790	

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Table 4. Structure of enrolment by grade, sex and zone - District of Ed-Dueim 1980/81

Grade	I		II		III		IV		V		VI		Total	
Zone	B	G	B	G	B	G	B	G	B	G	B	G	B	G
Urban	545	602 (1147)	496	630 (1126)	436	516 (952)	451	496 (947)	394	482 (876)	358	500 (858)	2680	3226 (5906)
Semi- urban	224	209 (433)	307	211 (518)	229	191 (420)	202	188 (390)	228	212 (440)	171	168 (339)	1361	1179 (2540)
Rural	2072	1190 (3262)	1636	1058 (2694)	1365	966 (2331)	1100	840 (1940)	1115	656 (1771)	1044	675 (1719)	8322	5385 (13717)
Whole District	2841	2001 (4841)	2439	1899 (4338)	2030	1673 (3703)	1753	1524 (3277)	1737	1350 (3087)	1573	1343 (2916)	12373	9790 (22163)

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Prepare a graph showing the distribution of enrolment by sex and grade for both rural and urban zones.

Comment on the various indicators calculated. What can you conclude concerning the coverage of the primary school system in the district.

II. Efficiency of the educational system

The educational information collected regularly at the school level and then agreggated at the provincial and central level says nothing about the internal efficiency of the school system, being admitted that there is automatic promotion and in particular from grade I to grade IV. During the survey it has been possible to collect data on promotees and repeaters in 18 primary schools in the different local councils of the district. This survey comprised schools for boys, girls and co-educational schools and covered 35% of those enrolled in urban primary schools, 58% in semi-urban schools and 23% in rural schools.

On the basis of this information complete the following tables and give your comments.

Table 5. Promotion, repetition and drop-out rates in the rural zone of Ed-Dueim District 1980/81 (Schools surveyed)

	Grades					
	I	II	III	IV	V	VI
1980 enrolment	558	557	515	485	371	388
1981						
Promoted/ admitted						
Repeaters	65	77	76	61	43	60
Total	695	547	521	463	425	378

	I/II	II/III	III/IV	IV/V	V/VI
Promotion rate					
Repetition "					
Drop-out "					

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Table 6. Promotion, repetition and drop-out rates by zone (Schools surveyed)

Zone	I-II	II-III	III-IV	IV-V	V-VI
Urban					
Promotion rate	83,5	78,2	81,3	80,9	81,7
Repetition "	13,8	13,9	12,7	13,5	13,7
Drop-out "	2,7	7,9	6,0	5,6	4,6
Semi-urban					
Promotion rate	87,6	86,3	80,9	79,1	83,1
Repetition "	10,0	11,5	16,4	18,5	15,3
Drop-out "	2,4	2,2	2,7	2,4	1,6
Rural					
Promotion rate					
Repetition "					
Drop-out "					

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III. Distance travelled by pupils

Comment the following table

Table 7. Travelling distance and means of transportation for pupils in primary schools by zone - District of Ed-Dueim 1980/81

Zone	N° of pupils surveyed	d ≤ 3km			3 < d ≤ 5 km		d > 5 km	
		Foot	Animals	Car	Foot	Animals	Foot	Animals
Urban	5486 (92,9%)	4860	93	204		25	304	
%	100,0	88,6	1,7	3,7		0,5	5,5	
Semi-urban	2461 (96,9%)	2408				53		
%	100,0	97,8				2,2		
Rural	8533 (68,0%)	6258	44		1228	106	817	80
%	100,0	73,3	0,5		14,4	1,2	9,6	1,0
Whole District	16480 (78,5%)	13526	137	204	1228	184	1121	80
%	100,0	82,1	0,8	1,2	7,5	1,1	6,8	0,5

I. Coverage of the educational system

Table 1. Admission rates by sex and zone - District of Ed-Dueim 1980/81

Zone	Population 7 years old (1981)			Enrolment in Grade 1 (1980/81)			Of whom repeaters			Admission rate %		
	M	F	T	M	F	T	M	F	T	M	F	T
Urban	888	784	1672	545	602	1147	147	94	241	44,8	64,8	54,2
Semi urban	838	735	1573	224	209	433	29	17	46	23,3	26,1	24,6
Rural	15059	13260	28319	2072	1190	3262	258	121	379	12,0	8,1	10,2
Whole District	16785	14779	31564	2641	2001	4842	434	232	666	14,3	12,0	13,2

Table 2. Gross enrolment ratio by sex and zone - District of Ed-Dueim 1980/81

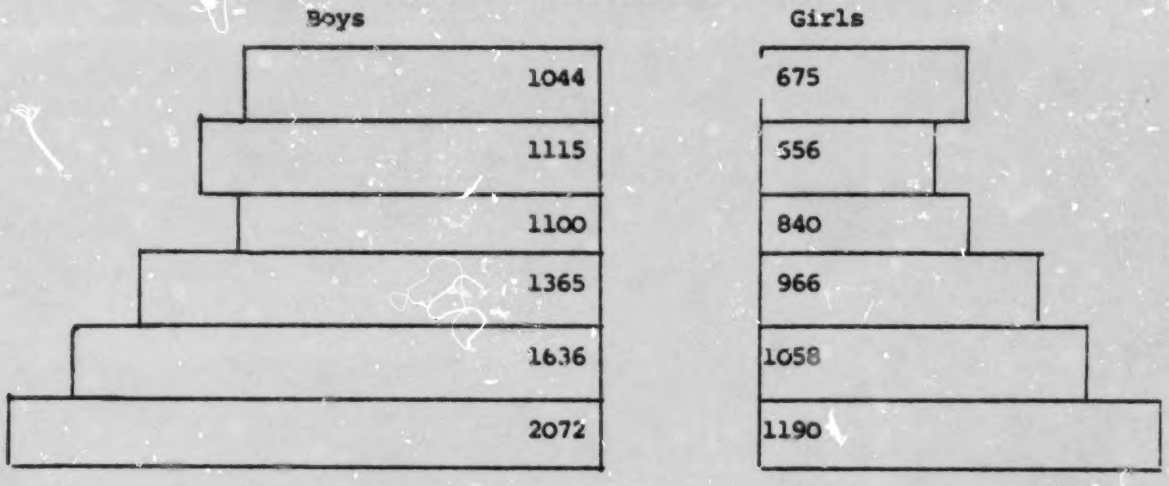
Zone	Population 7-12 (1981)			Enrolment in grades 1-6 (1980/81)			Gross enrolment ratio		
	M	F	T	M	F	T	M	F	T
Urban	3656	3304	6960	2680	3226	5906	73,3	97,6	84,9
Semi-urban	3448	3100	6548	1361	1179	2540	39,5	38,0	38,8
Rural	61997	55909	117906	8332	5385	13717	13,4	9,6	11,6
Whole District	69101	62313	131414	12373	9790	22163	17,9	15,7	16,9

Table 3. Percentage of girls in primary education by zone - District of Ed-Dueim 1980/81

Zone	Total enrolment	Girls	%
Urban	5906	3226	54,6
Semi-urban	2540	1179	46,4
Rural	13717	5385	39,3
Whole District	22163	9790	44,2

Graph 1. Distribution of enrolments by grade and sex in the rural and urban zones of Ed-Dueim District - 1980/81

RURAL ZONE



URBAN ZONE

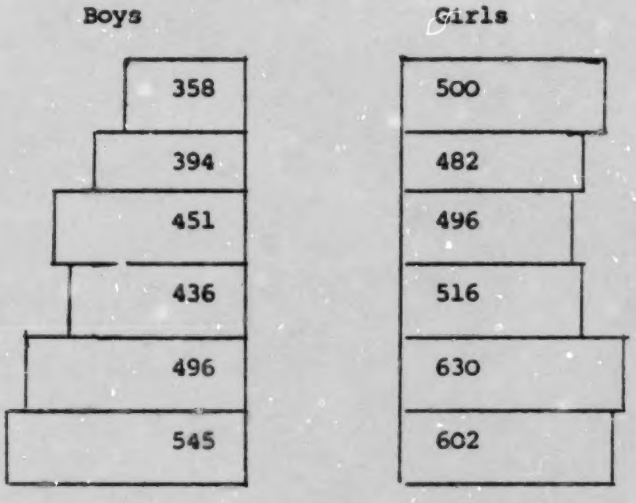


Table 4. Promotion, repetition and drop-out rates in the rural zone of Ed-Dueim District 1980/81

	Grades					
	I	II	III	IV	V	VI
1980 enrolment	558	557	515	485	371	388
1981						
Promoted/ admitted	630	470	445	402	382	318
Repeaters	65	77	76	61	43	60
Total	695	547	521	463	425	378

	I	II	III	IV	V	VI
Promotion rate	84,2	79,9	78,1	78,8	85,7	
Repetition "	11,6	13,8	14,8	12,6	11,6	15,5
Drop-out "	4,2	6,3	7,1	8,6	2,7	

Table 5. Promotion, repetition and drop-out rates by zone

Zone	I-II	II-III	III-IV	IV-V	V-VI
Urban					
Promotion rate	83,5	78,2	81,3	80,9	81,7
Repetition "	13,6	13,9	12,7	13,5	13,7
Drop-out "	2,7	7,9	6,0	5,6	4,6
Semi-urban					
Promotion rate	87,6	86,3	80,9	79,1	83,1
Repetition "	10,0	11,5	16,4	18,5	15,3
Drop-out "	2,4	2,2	2,7	2,4	1,6
Rural					
Promotion rate	84,2	79,9	78,1	78,8	85,7
Repetition "	11,6	13,8	14,8	12,6	11,6
Drop-out "	4,2	6,3	7,1	8,6	2,7

III. Distance travelled by pupils

Table 6. Travelling distance and means of transportation for pupils in primary schools by zone - District of Ed-Dueim 1980/81

Zone	N° of pupils surveyed	d ≤ 3km			3 < d ≤ 5 km		d > 5 km	
		Foot	Animals	Car	Foot	Animals	Foot	Animals
Urban	5486 (92,9%)	4860	93	204		25	304	
%	100,0	88,6	1,7	3,7		0,5	5,5	
Semi-urban	2461 (96,9%)	2408				53		
%	100,0	97,8				2,2		
Rural	8533 (68,0%)	6258	44		1228	106	817	80
%	100,0	73,3	0,5		14,4	1,2	9,6	1,0
Whole District	16480 (78,5%)	13526	137	204	1228	184	1121	80
%	100,0	82,1	0,8	1,2	7,5	1,1	6,8	0,5

EXERCISE N° IV

DIAGNOSIS OF ENROLMENT AT SECONDARY LEVEL

I. Junior Secondary Education

There are 27 junior secondary schools in the district of Ed-Dueim for the year 1980/81 with a total enrolment of 4323. Sixteen of these schools have been surveyed with an enrolment of 3335 (77,1%), and data on the enrolment of the remaining 11 schools have been gathered from the traditional school forms available at the district level.

a. Complete the following table as regards the development of junior secondary education in the district and give your comments.

Table 1. Gross enrolment rate by sex and zone in junior secondary education - District of Ed-Dueim 1980/81

Zone	Population 13-15			Enrolment			Gross enrolment rate %		
	M	F	T	B	G	T	M	F	T
Urban	1075	935	2010	1564	1208	2772	145,5	129,2	137,9
Semi-urban	1015	875	1890	266	385	651			
Rural	18230	15800	34030	618	282	900			
Whole District	20320	17610	37930	2448	1875	4323			

b. Comment the following tables with regard to the percentage of girls in junior secondary education.

Table 2. Percentage of girls enrolled in all junior secondary schools by grade 1980/81

Grade	I			II			III			Total		
	T	G	%	T	G	%	T	G	%	T	G	%
	1836	780	42,5	1090	524	48,1	1397	571	40,9	4323	1875	43,4

Table 3. Percentage of girls enrolled in junior secondary schools by grade and zone - District of Ed-Dueim 1980/81 (schools surveyed)

Grade / Zone	I			II			III			Total		
	Enrol-ment	Girls	%	Enrol-ment	Girls	%	Enrol-ment	Girls	%	Enrol-ment	Girls	%
Urban	850	409	48,1	605	306	50,6	679	302	44,5	2134	1017	47,7
Semi-urban	203	146	71,9	146	78	53,4	166	100	60,2	515	324	62,9
Rural	258	87	33,7	144	44	30,6	279	107	38,3	681	238	34,9
Whole District	1311	642	49,0	895	428	47,8	1124	509	45,3	3330	1579	47,4

c. Due to the non-availability of data on pupils enrolled by grade in the district of Ed-Dueim for the year 1979/80, the transition rate to junior secondary education for the same district in the year 1980/81 cannot be calculated. It is possible however to do it for the whole province. Compute this transition rate for the whole province and give your comments.

Table 4. Apparent transition rate to junior secondary education in the White Nile Province by sex 1980/81

Enrolment in grade VI (Primary) - 1979/80			Enrolment in grade I (intermediate) - 1980/81			Apparent transition rate		
B	G	T	B	G	T	B	G	T
7378	5317	12695	4622	2609	7231			

d. Travelling distance and means of transportation

Complete the following table and give your comments with regard to 16 junior secondary schools surveyed in the district of Ed-Dueim.

Table 5. Travelling distance and means of transportation for students in junior secondary schools - District of Ed-Dueim 1980/81

Zone	N° of resp. schools	N°of students	d ≤ 5km					5 < d ≤ 8					d > 8					N° of boarders
			Foot	Donkeys	Bicycle	Car	Total	Foot	Donkeys	Bicycle	Car	Total	Foot	Donkeys	Bicycle	Car	Total	
Urban	8	2139	1771			26	1797	24	-	-	-	24	20	75	8	67	170	148
	%		82,8	-	-	1,2	84,0	1,1	-	-	-	1,1	0,9	3,5	0,4	3,1	7,9	6,9
Semi-urban	3	515	327	-	-	-	327	168	20	-	-	188	-	-	-	-	-	-
	%																	
Rural	5	681	192	5	6	-	203	95	7	-	-	102	216	22	24	39	301	75
	%																	

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II. Higher secondary education

The district of Ed-Dueim has 3 academic and one technical secondary schools all of them located in the city of Ed-Dueim. Two of these academic secondary schools are for boys and one is for girls. All of them are providing boarding facilities. One of the boys' schools and the schools for girls have been constructed by the parents and offered to the Ministry of Education.

a. Transition rate

Complete the following table by computing the transition rate for higher secondary grade I education. It is important to note that this transition rate is not actual but merely shows the transfer of junior secondary school leavers in 1979/80 to higher secondary grade I education in schools located in the city of Ed-Dueim in 1980/81.

Table 6. Transition rate to higher secondary education in the district of Ed-Dueim - 1980/81

Junior secondary leavers	Grade I Enrolment 1980/81		Transition rate
Grade III 1979/80	Total	Of whom repeaters	%
821	576	30	

b. Travelling distance and means of transportation

Complete the following table with respect to school B and comment upon the findings.

Table 7. Travelling distance and means of transportation for students in higher secondary schools - District of Ed-Dueim 1980/81

School	N° of students	N° of boarders	$d \leq 5$ km				$d > 5$			
			Foot	Bicycle	Car	Total	Foot	Bicycle	Car	Total
A	785	498	100	40	147	287				
	%	63,4	12,7	5,2	18,7	36,6				
B	508	60	300	50	50	400	-	-	48	48
	%									
C	719	397	148	79	95	322				
	%	55,2	20,6	11,0	13,2	44,8				

SOLUTION TO EXERCISE N° IV

DIAGNOSIS OF ENROLMENT AT SECONDARY LEVEL

I. Junior secondary education

Table 1. Gross enrolment rate by sex and zone in junior secondary education - District of Ed-Dueim 1980/81

Zone	Population 13-15			Enrolment			Gross enrolment rate %		
	M	F	T	B	G	T	M	F	T
Urban	1075	935	2010	1564	1208	2772	145,5	129,2	137,9
Semi-urban	1015	875	1890	266	385	651	26,2	44,0	34,4
Pural	18230	15800	34030	618	282	900	3,4	1,8	2,6
Whole District	20320	17610	37930	2448	1875	4323	12,0	10,6	11,4

Table 2. Percentage of girls enrolled in all junior secondary schools by grade 1980/81

Grade	I			II			III			Total		
	T	G	%	T	G	%	T	G	%	T	G	%
	1836	780	42,5	1090	524	48,1	1397	571	40,9	4323	1875	43,4

Table 3. Percentage of girls enrolled in junior secondary schools by grade and zone - District of Ed-Dueim 1980/81 (schools surveyed)

Grade / Zone	I			II			III			Total		
	Enrol-ment	Girls	%	Enrol-ment	Girls	%	Enrol-ment	Girls	%	Enrol-ment	Girls	%
Urban	850	409	48,1	605	306	50,6	679	302	44,5	2134	1017	47,7
Semi-urban	203	146	71,9	146	78	53,4	166	100	60,2	515	324	62,9
Rural	258	87	33,7	144	44	30,6	279	107	38,3	681	238	34,9
Whole District	1311	642	49,0	895	428	47,8	1124	509	45,3	3330	1579	47,4

Table 4. Apparent transition rate to junior secondary education in the White Nile Province by sex 1980/81

Enrolment in grade VI (Primary) - 1979/80			Enrolment in grade I (intermediate) - 1980/81			Apparent transition rate		
B	G	T	B	G	T	B	G	T
7378	5317	12695	4622	2609	7231	62,6	49,1	57,0

Table 5. Travelling distance and means of transportation for students in junior secondary schools - District of Ed-Dueim 1980/81

Zone	N° of resp. schools	N°of students	d ≤ 5km					5 < d ≤ 8					d > 8					N° of boarders
			Foot	Don-keys	Bicy-cle	Car	Total	Foot	Don-keys	Bicy-cle	Car	Total	Foot	Don-keys	Bicy-cle	Car	Total	
Urban	8	2139	1771			26	1797	24	-	-	-	24	20	75	8	67	170	148
	%		82,8	-	-	1,2	84,0	1,1	-	-	-	1,1	0,9	3,5	0,4	3,1	7,9	6,9
Semi-urban	3	515	327	-	-	-	327	168	20	-	-	188	-	-	-	-	-	-
	%		63,5				63,5	32,6	3,9			36,5						
Rural	5	681	192	5	6	-	203	95	7	-	-	102	216	22	24	39	301	75
	%		28,2	0,7	0,9	-	29,8	13,9	1,1	-	-	15,0	31,7	3,2	3,5	5,7	44,2	11,0

II. Higher secondary education

Table 6. Transition rate to higher secondary education in the district of Ed-Dueim - 1980/81

Junior secondary leavers	Grade I Enrolment 1980/81		Transition rate
Grade III 1979/80	Total	Of whom repeaters	%
821	576	30	66,5

Table 7. Travelling distance and means of transportation for students in higher secondary schools - District of Ed-Dueim 1980/81

School	N° of students	N° of boarders	d ≤ 5 km				5 < d ≤ 10			
			Foot	Bicycle	Car	Total	Foot	Bicycle	Car	Total
A	785	498	100	40	147	287				
	%	63,4	12,7	5,2	18,7	36,6				
B	508	60	300	50	50	400	-	-	48	48
	%	11,8	59,1	9,8	9,8	78,7			9,5	9,5
C	719	397	148	79	95	322				
	%	55,2	20,6	11,0	13,2	44,8				

EXERCISE N° V

DIAGNOSIS OF STAFFING CONDITIONS

I) Primary education

1) Qualification of teachers

Until 1970, all primary teachers entered the profession only after completing teacher training. The recruits to primary teacher training may be either intermediate school-leavers who follow a four-year course of training or secondary school-leavers who follow a one-year course of training. But the subsequent rapid expansion of primary education has meant that the demand for new teachers has increased faster than the expansion of teacher training facilities, so that untrained secondary school-leavers are now recruited as teachers as well. To cater for the needs of these untrained primary teachers, a series of in-service education institutes has been created, and one of these is located in Ed-Dueim.

On the basis of this information, complete the following table and give your comments.

Table 1. Qualification and training of primary school teachers by zone. District of Ed-Dueim 1980/81

Zone	N° of schools surveyed	Category of teachers			Total
		Sec. school leavers (untrained)	Sec.school leavers trained on the job	Teacher training institute leavers	
Urban	17	63	8	126	197
	%	32,0	4,1	63,9	100,0
Semi urban	6	33	2	31	66
	%				
Rural	36	172	12	75	259
	%				
Total District	59	268	22	232	522
	%				

2) Staffing ratio

The standard teaching load in primary schools is taken to be 24 periods per week. Most of the schools have introduced a double-shift system, or sometimes a triple-shift system because of the lack of classromms facilities. They thus teach less periods to all grades compared to schools organized on a single shift basis.

In a typical one-stream school, the same teacher teaches all the subjects to the grade one i.e. 25 periods per week. The other teachers teach on a subject basis to different classes and grades. The official staffing ratio for a full one-stream primary school is 6 x 1.3 = 7.8 = 8.

In the light of this information complete tables 2 and 3 and comment.

Table 2. Pupil/teacher ratic in primary schools - District of Ed-Dueim 1980/81

Zone	N° of sch. surveyed	Enrol-ment	Total N° of teachers	Total N° of sections	Enrol-ment per section	N° of teachers per section	Pupils per teacher	Total N° of tea-ching periods per wk	Average teaching load
Urban	17	5526	197	101	54.7	1.95	28.1	3247	16,5
Semi urban	6	2514	66	46				1372	
Rural	36	6985	259	207				6480	
Total District	59	15025	522	354				11099	

Table 3. Primary teaching force by sex and zone - District of Ed-Dueim 1980/81

	Type of schools surveyed				Teaching force		
Zone	B	G	C	Total	M	F	Total
Urban	6	4	7	17	76	121	197
%	35,3	23,5	41,2	100,0			
Semi urban	3	2	1	6	35	31	66
%	50,0	33,3	16,7	100,0			
Rural	4	5	27	36	197	62	259
%	11,1	13,9	75,0	100,0			
Total District	13	14	32	59	308	214	522
	22,0	23,7	54,2	100,0			

II) Secondary education

a) Comment on the following table with respect to training of intermediate and secondary school teachers.

Table 4. Training of teachers in junior and higher secondary schools - District of Ed-Dueim 1980/81

Zone	Intermediate level				Secondary level			
	N° of schools surveyed	Junior secondary school teachers Trained	Untrained	Total	Higher secondary school teachers School	Trained	Untrained	Total
Urban	8	57	44	101	A	13	14	27
	%	56,4	43,6	100,0	%	48,2	51,8	100,0
Semi urban	3	8	14	22	B	7	9	16
	%							
Rural	5	10	24	34	C	9	13	22
	%							
Total	16	75	82	157	Total District	29	36	65
District	%				%			

b) Staffing ratio

- Secondary school "A"
- Enrolment in 1980/81: 785
- Total number of teachers: 27

Using the information available in table 5, calculate the following :

- Average number of periods taught per teacher =
- N° of teachers full-time equivalent =
- Pupil/teacher ratio =
- Full-time equivalent pupil/teacher ratio =

Note : A full-time teacher should teach 24 periods per week.

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Table 5. Weekly teaching load per teacher in secondary school "A"

Teacher	N° of periods taught per week	Subject
1	12	Religion
2	12	"
3	15	"
4	24	Arabic
5	24	"
6	22	"
7	16	"
8	18	English
9	24	"
10	20	"
11	24	"
12	18	Mathematics
13	18	"
14	18	"
15	14	"
16	14	"
17	18	Science
18	18	"
19	18	"
20	16	"
21	9	Geography
22	9	"
23	9	"
24	21	History
25	22	"
26	16	French
27	9	Physical education

SOLUTION TO EXERCISE N° V

DIAGNOSIS OF STAFFING CONDITIONS

Table 1. Qualification and training of primary school teachers by zone

District of Ed-Dueim 1980/81

Zone	N° of schools surveyed	Category of teachers			Total
		Sec. school leavers (untrained)	Sec. school leavers trained on the job	Teacher-training institute leavers	
Urban	17	63	8	126	197
	%	32,0	4,1	63,9	100,0
Semi urban	6	33	2	31	66
	%	50,0	3,0	47,0	100,0
Rural	36	172	12	75	259
	%	66,4	4,6	29,0	100,0
Total District	59	268	22	232	522
	%	51,3	4,2	44,5	100,0

Table 2. Pupil/teacher ratio in primary schools - District of Ed-Dueim 1980/81

Zone	N° of sch. surveyed	Enrol-ment	Total N° of teachers	Total N° of sections	Enrol-ment per section	N° of teachers per section	Pupils per teacher	Total N° of tea-ching periods per wk	Average teaching load
Urban	17	5526	197	101	54.7	1.95	28.1	3247	16,5
Semi urban	6	2514	66	46	54,7	1.43	38.1	1372	20,8
Rural	36	6985	259	207	33,7	1.25	27,0	6480	25,0
Total District	59	15025	522	354	42,4	1.47	28,8	11099	21,3

Table 3. Primary teaching force by sex and zone - District of Ed-Dueim 1980/81

	Type of schools surveyed				Teaching force		
Zone	B	G	C	Total	M	F	Total
Urban	6	4	7	17	76	121	197
%	35,3	23,5	41,2	100,0	38,6	61,4	100,0
Semi urban	3	2	1	6	35	31	66
%	50,0	33,3	16,7	100,0	53,0	47,0	100,0
Rural	4	5	27	36	197	62	259
%	11,1	13,9	75,0	100,0	76,1	23,9	100,0
Total District	13	14	32	59	308	214	522
	22,0	23,7	54,2	100,0	59,0	41,0	100,0

II) Secondary education

a) Training of teachers

Table 4. Training of teachers in junior and higher secondary schools - District of Ed-Dueim 1980/81

Zone	Intermediate level				Secondary level			
	N° of schools surveyed	Junior secondary school teachers			Higher secondary school teachers			
		Trained	Untrained	Total	School	Trained	Untrained	Total
Urban	8	57	44	101	A	13	14	27
	%	56,4	43,6	100,0	%	48,2	51,8	100,0
Semi urban	3	8	14	22	B	7	9	16
	%	36,4	63,6	100,0	%	43,8	56,2	100,0
Rural	5	10	24	34	C	9	13	22
	%	29,4	70,6	100,0	%	40,9	59,1	100,00
Total District	16	75	82	157	Total District	29	36	65
	%	47,8	52,2	100,0	%	44,6	55,4	100,0

b) Staffing ratio

- Secondary school "A"
- Enrolment in 1980/81: 785
- Total number of teachers: 27
- Average number of periods taught per teacher = $\frac{458}{27}$ = 17
- Number of teachers full-time equivalent = $\frac{458}{24}$ = 19,1
- Pupil/teacher ratio = $\frac{785}{27}$ 29,1
- Full-time equivalent pupil/teacher ratio = $\frac{785}{19,1}$ = 41,1

EXERCISE N° VI

DIAGNOSIS OF EDUCATIONAL FACILITIES

I. Primary education

a) Teaching spaces

Using the data available in Appendix 1, complete tables 1 and 2 and give your comments.

Table 1. Analysis of educational spaces per zone - District of Ed-Dueim 1980/81

Zone	Total enrolment	N° of classrooms	Total classrooms area sq m	Area per classroom sq m	Area per pupil sq m
Urban	5906	85	3550		
Semi urban	2540	41	1739		
Rural	9214	199	8813		
Total District	17660	325			

Table 2. Analysis of primary education classrooms (area and state) in the District of Ed-Dueim 1980/81 (schools surveyed)

Zone	Total enrol-ment	N° of schools	Enrol-ment per school	N° of double shift sch.	N° of sections	N° of class-rooms	State of classrooms		
							Good or regular	Bad	Needing main-tenance
Urban	5906	17	347	11	105	85	58	-	27
	%			64,7		100,0	68,2	-	31,8
Semi urban	2540	6	423	1	44	41	6	-	35
	%			16,7		100,0			
Rural	9214	36	256	15	208	199	89	8	102
	%			41,7		100,0			
Whole District	17660	59	299	27	357	325	153	8	164
	%			45,8		100,0			

b) Other facilities, equipment and services available

Complete the following tables 3 and 4 with regard to the availability of other facilities, equipment and teaching material in primary schools.

Table 3. Other facilities and services available in primary schools by zone - District of Ed-Dueim 1980/81

Zone	N° of responding schools	Schools provided with electricity	Schools provided with water	Schools provided with latrines	Schools having storage room
Urban	16	7	16	11	7
%		43,7	100,0	68,7	43,7
Semi urban	6	2	5	3	3
%					
Rural	34	2	23	10	13
%					
Whole District	56	11	44	24	23
%					

Table 4. School furniture and textbooks available in primary schools - District of Ed-Dueim 1980/81

Zone	Pupils covered in the survey	Availability of seats			Availability of textbooks			
		Seats in good condition	Seats to be replaced	Shortage	Textbooks needed	Available	To be replaced	Shortage
Urban	5906	4048	547	1311	20571	6578	5278	8715
%		68,5	9,3	22,2		32,0	25,7	42,3
Semi urban	2540	1108	651	781	12719	4032	2697	5990
%		43,6	25,6	30,8		31,7	21,2	47,1
Rural	8752	3813	2127	2812	51380	15478	14277	21625
%								
Total District	17198	8969	3325	4904	84670	26088	22252	36330
%								

II. Secondary education - secondary school "A"

Results of the 1981 survey

Educational spaces	N°	Area sq m	Periods of ulilization	Equipment	Teaching material
- General classrooms	13	572	379	insufficient seats and tables	insufficient blackboards and maps
- Science laboratory	2	136	70	"	"
- Fine art room	1	250	0	"	"
Total educational area		958			
Administration services					
- Offices	4	120			
- Stores	5	120			
- Other	1	48			
- Dispensary	1				
- Toilets	35				

Giving that in 1981 there was : Total enrolment : 785 students (498 of them are boarders)
N° of sections : 13
" " teachers : 27 + 1 headmaster and 1 supervisor
Ancillary staff : 29

Compute: - classroom area per pupil =
- specialized classroom area per pupil =
- laboratory area per pupil/per section
- total educational area per pupil =
- rate of utilization of classrooms =
- " " " laboratories =

N.B. Maximum weekly school periods = 45

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Appendix 1. Data on educational spaces in primary schools - Semi-urban zone - District of Ed-Dueim 1980/81

School N°	Total enrol-ment	N° of sections	Shifts	Classrooms N°	Classrooms Surface	State of classrooms: Good or regular	State of classrooms: Bad	State of classrooms: Needing maintenance	Head master's office	Staff room	Storage room	Teachers' houses
1	341	6	1	6	x 40	-	-	6	1	1	-	-
2	345	6	1	6	x 40	-	-	6	1	1	-	-
3	694	12	2	11	x 49	-	-	11	1	1	1	-
4	408	8	1	6	x 40	-	-	6	1	1	1	-
5	339	6	1	6	x 40	6	-	-	1	1	-	-
6	413	6	1	6	x 40	-	-	6	1	1	1	-

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SOLUTION TO EXERCISE N° VI

DIAGNOSIS OF EDUCATIONAL FACILITIES

I. Primary education

a) Teaching spaces

Table 1. Analysis of educational spaces per zone - District of Ed-Dueim 1980/81

Zone	Total enrol-ment	N° of classrooms	Total class-rooms area sq m	Area per classroom sq m	Area per pupil sq m
Urban	5906	85	3550	41,8	0,60
Semi urban	2540	41	1739	42,4	0,68
Rural	9214	199	8813	44,3	0,96
Total District	17660	325	14102	43,4	0,80

Table 2. Analysis of primary education classrooms (area and state) in the district of Ed-Dueim 1980/81 (schools surveyed)

Zone	Total enrolment	N° of schools	Enrolment per school	N° of double shift schools	N° of sections	N° of class rooms	State of classrooms		
							Good or regular	Bad	Needing maintenance
Urban	5906	17	347	11	105	85	58	-	27
	%			64,7		100,0	68,2	-	31,8
Semi urban	2540	6	423	1	44	41	6	-	35
	%			16,7		100,0	14,6	-	85,4
Rural	9214	36	256	15	208	199	89	8	102
	%			41,7		100,0	44,7	4,0	51,3
Whole District	17660	59	299	27	357	325	153	8	164
	%			45,8		100,0	47,1	2,5	50,4

b) Other facilities, equipment and services available

Table 3. Other facilities and services available in primary schools by zone - District of Ed-Dueim 1980/81

Zone	N° of responding schools	Schools provided with electricity	Schools provided with water	Schools provided with latrines	Schools having storage room
Urban	16	7	16	11	7
%		43,7	100,0	68,7	43,7
Semi urban	6	2	5	3	3
%		33,3	83,3	50,0	50,0
Rural	34	2	23	10	13
%		5,9	67,6	29,4	38,2
Whole District	56	11	44	24	23
%		19,6	78,6	42,9	41,1

Table 4. School furnitures and textbooks available in primary schools - District of Ed-Dueim 1980/81

Zone	Pupils covered in the survey	Availability of seats			Availability of textbooks			
		Seats in good condition	Seats to be replaced	Shortage	Textbooks needed	Available	To be replaced	Shortage
Urban	5906	4048	547	1311	20571	6578	5278	8715
%		68,5	9,3	22,2		32,0	25,7	42,3
Semi urban	2540	1108	651	781	12719	4032	2697	5990
%		43,6	25,6	30,8		31,7	21,2	47,1
Rural	8752	3813	2127	2812	51380	15478	14277	21625
%		43,6	24,3	32,1		30,1	27,8	42,1
Total District	17198	8969	3325	4904	84670	26088	22252	36330
%		52,2	19,3	28,5		30,8	26,3	42,9

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II. Secondary education - Secondary school "A"

- classroom area per pupil $= \frac{572}{785} = 0,73$ sq m
- Specialized classroom area per pupil $= \frac{386}{785} = 0,49$ sq m
- Laboratory area per pupil/per section $= \frac{785}{13} = 60,4$; $\frac{136}{2} = 68$
- Total educational area per pupil $= \frac{958}{785} = 1,22$ sq m $\frac{68}{60,4} = 1,13$ sq.m
- Rate of utilization of classrooms $= \frac{379}{13 \times 45} = 64,8\%$
- " " of laboratories $= \frac{70}{2x45} = 77,8\%$

N.B. Maximum weekly school periods = 45

EXERCISE N° VII

PROJECTION OF ENROLMENT IN PRIMARY EDUCATION

When projecting enrolment in primary education one has to :

- project school-age population,
- make some assumptions concerning the evolution of the rate of admission,
- project admission,
- define the rates of promotion, repetition and drop-out to be used in the future,
- compute future enrolment.

1. Projection of enrolment in the rural zone of Ed-Dueim District : assumptions

a) The seven-year old population will represent 4.6 per cent per year of the total projected population in the zone as done by the Central Statistical Department.

b) The rates of promotion, repetition and drop-out observed in 1980/81 will remain the same all over the period 1980/81 - 1990/91.

c) Two alternatives are used concerning the evolution of the rates of admission : alternative A with 100% as admission rate in the year 1990/91 and alternative B with 40% as admission rate in the year 1990/91.

In the light of these assumptions complete the following tables and give your comments.

Table 1. Projection of admissions in primary schools - rural zone of Ed-Dueim district 1980/81 - 1980/81 - 1990/91

Year	N° of 7-yr olds	Alternative A		Alternative B	
		Admission rate %	New adm.	Adm. rate %	New adm.
1980/81	28320	10,6	2989	10,6	2989
1981/82	29284	15,0		10,7 *	
1982/83	30274	20,0		10,8 *	
1983/84	31297	25,0		12,0	
1984/85	32355	35,0		13,5	
1985/86	33449	45,0		15,0	
1986/87	34579	55,0		20,0	
1987/88	35748	65,0		25,0	
1988/89	36956	75,0		30,0	
1989/90	38205	85,0		35,0	
1990/91	39497	100,0		40,0	

* estimated

Table 2. Projection of enrolment by grade (rural zone) District of Ed-Dueim - 1980/81 - 1990/91

(Alternative A)

Year	New admissions / Grade	I	II	III	IV	V	VI	Total
1980/81	2989	3368	2383	2151	1737	1524	1380	12543
1981/82	R							
	P							
	T							
1982/83	R							
	P							
	T							
1983/84	R							
	P							
	T							
1984/85	R							
	P							
	T							
1985/86	R							
	P							
	T							
1986/87	R							
	P							
	T							
1987/88	R							
	P							
	T							
1988/89	R							
	P							
	T							
1989/90	R							
	P							
	T							
1990/1991	R							
	P							

Note: R = Repeaters P = Promoted or admitted T = Total

Table 3. Projection of enrolment by grade (rural zone) District of Ed-Dueim - 1980/81 - 1990/91

(Alternative B)

Year	New admissions	Grade	I	II	III	IV	V	VI	Total
1980/81	2989		3368	2383	2151	1737	1524	1380	12543
1981/82		R							
		P							
		T							
1982/83		R							
		P							
		T							
1983/84		R							
		P							
		T							
1984/85		R							
		P							
		T							
1985/86		R							
		P							
		T							
1986/87		R							
		P							
		T							
1987/88		R							
		P							
		T							
1988/89		R							
		P							
		T							
1989/90		R							
		P							
		T							
1990/1991		R							
		P							

Note: R = Repeaters P = Promoted or admitted T = Total

2. Draw a graph showing the growth of enrolment in the rural zone of Ed-Dueim from 1980/81 to 1990/91 and compute the average growth rate for the same period for each of the two alternatives.

Annex 1. Promotion, repetition and drop-out rates - District of Ed-Dueim 1980/81

Grade	I	II	III	IV	V	VI
Promotion	83,0	80,0	77,0	79,0	78,0	
Repetition	13,0	14,0	16,0	15,0	16,0	19,0
Drop-out	4,0	6,0	7,0	6,0	6,0	

SOLUTION TO EXERCISE N° VII

PROJECTION OF ENROLMENT IN PRIMARY EDUCATION

Table 1. Projection of admissions to primary schools for the rural zone of Ed-Dueim District (1980/81 - 1990/91)

Year	N° of 7-yr olds				
		Admission rate %	New adm.	Admission rate %	New adm.
1980/81	28320	10,6	2989	10,6	2989
1981/82	29284	15,0	4393	10,7 *	3133
1982/83	30274	20,0	6055	10,8 *	3270
1983/84	31297	25,0	7824	12,0	3756
1984/85	32355	35,0	11324	13,5	4368
1985/86	33449	45,0	15052	15,0	5017
1986/87	34579	55,0	19018	20,0	6916
1987/88	35748	65,0	23236	25,0	8937
1988/89	36956	75,0	27717	30,0	11087
1989/90	38205	85,0	32474	35,0	13372
1990/91	39497	100,0	39497	40,0	15800

* estimated

Table 2. Projection of enrolment by grade (rural zone) District of Ed-Dueim 1980/81 - 1990/91 (Alternative A)

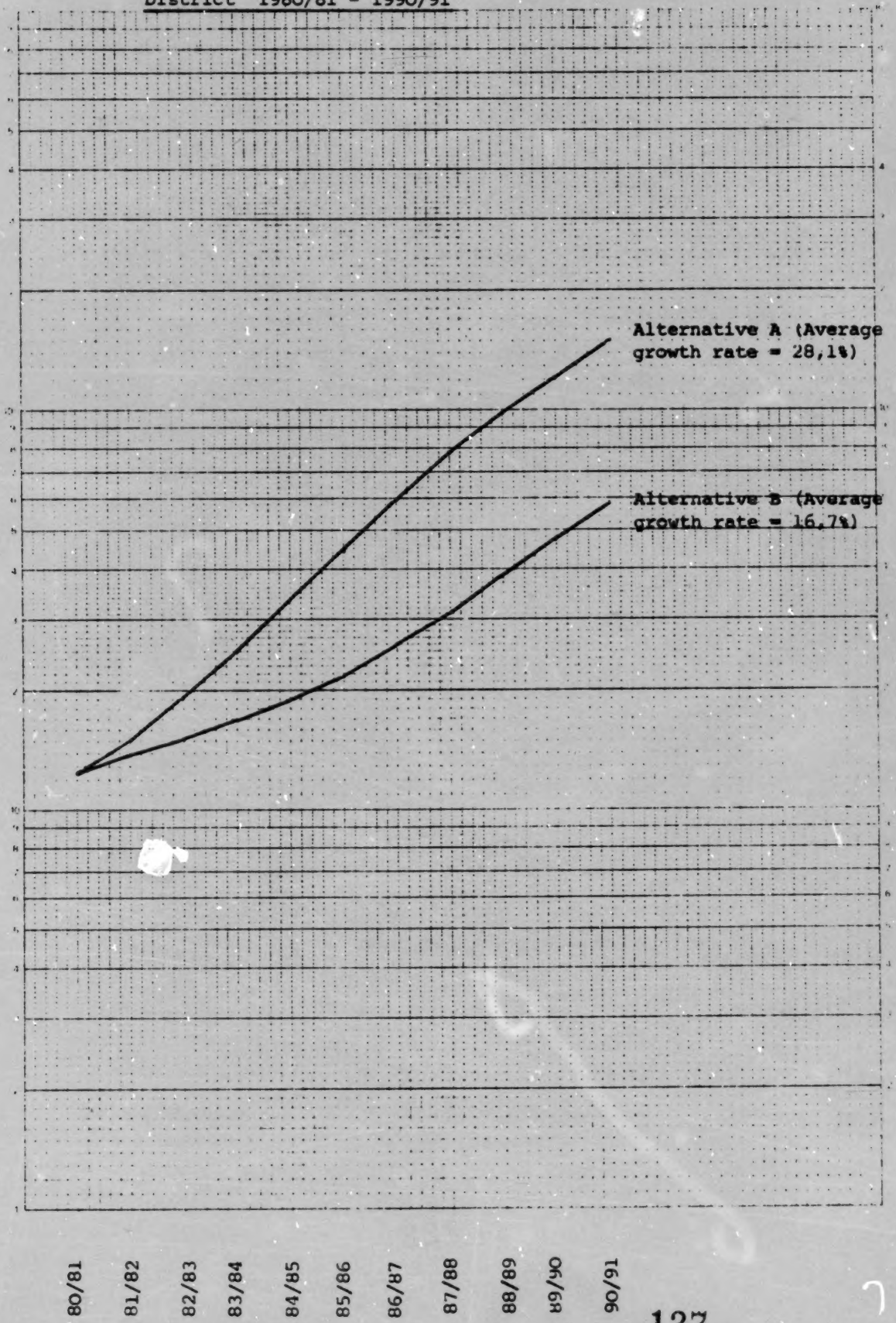
Year	New admissions	Grade	I	II	III	IV	V	VI	Total
1980/81	2989		3368	2383	2151	1737	1524	1380	12543
1981/82	4393 →	R	438	334	344	261	244	262	15194
		P	4393	2795	1906	1656	1372	1189	
		T	4831	3129	2250	1917	1616	1451	
1982/83	6055 →	R	628	438	360	288	259	276	19323
		P	6055	4010	2503	1732	1514	1260	
		T	6683	4448	2863	2020	1773	1536	
1983/84	7824 →	R	869	623	458	303	284	292	24942
		P	7824	5547	3558	2205	1596	1383	
		T	8693	6170	4016	2508	1880	1675	
1984/85	11324 →	R	1130	864	643	376	301	318	33646
		P	11324	7215	4936	3092	1981	1466	
		T	12454	8079	5579	3468	2282	1784	
1985/86	15052 →	R	1619	1131	893	520	365	339	45534
		P	15052	10336	6463	4296	2740	1780	
		T	16671	11467	7356	4816	3105	2119	
1986/87	19018 →	R	2167	1605	1177	722	497	403	60389
		P	19018	13826	9173	5564	3805	2422	
		T	21185	15441	10350	6286	4302	2825	
1987/88	23236 →	R	2754	2161	1656	943	688	537	78202
		P	23236	17584	12352	7969	4966	3356	
		T	25990	19745	14008	8912	5654	3893	
1988/89	27717 →	R	3379	2764	2241	1337	905	740	98687
		P	27717	21572	15796	10786	7040	4410	
		T	31096	24336	18037	12123	7945	5150	
1989/90	32474 →	R	4042	3407	2886	1816	1271	979	121815
		P	32474	25810	19469	13887	9577	6197	
		T	36516	29217	22355	15703	10848	7176	
1990/91	39497 →	R	4747	4090	3577	2355	1736	1363	149130
		P	39497	30308	23374	17213	12408	8461	
		T	44244	34398	26951	19568	14144	9824	

R = Repeaters P = Promoted or Admitted T = Total

Table 3. Projection of enrolment by grade (rural zone) District of Ed-Dueim 1980/81 - 1990/91 (Alternative B)

Year	New adm.	Grade	I	II	III	IV	V	VI	Total
1980/81	2989		3368	2383	2151	1737	1524	1380	12543
1981/82		R	438	334	344	261	244	262	
	3133	P	3133	2795	1906	1656	1372	1189	13934
		T	3571	3129	2250	1917	1616	1451	
1982/83		R	464	438	360	288	259	276	
	3270	P	3270	2964	2503	1732	1514	1260	15328
		T	3734	3402	2863	2020	1773	1536	
1983/84		R	485	476	458	303	284	292	
	3756	P	3756	3099	2722	2205	1596	1383	17059
		T	4241	3575	3180	2508	1880	1675	
1984/85		R	551	500	509	376	301	318	
	4368	P	4368	3520	2860	2449	1982	1466	19200
		T	4919	4020	3369	2825	2283	1784	
1985/86		R	639	563	539	424	365	339	
	5017	P	5017	4083	3216	2594	2232	1780	21791
			5656	4646	3755	3018	2597	2119	
1986/87		R	735	650	601	453	416	403	
	6916	P	6916	4694	3717	2891	2384	2026	25886
		T	7651	5344	4318	3344	2800	2429	
1987/88		R	995	748	691	502	448	389	
	8937	P	8937	6350	4275	3325	2642	2184	31486
		T	9932	7098	4966	3827	3090	2573	
1988/89		R	1291	994	795	574	494	489	
	11087	P	11087	8244	5678	3824	3023	2410	38903
		T	12378	9238	6473	4398	3517	2899	
1989/90		R	1609	1293	1036	660	563	551	
	13372	P	13372	10274	7390	4984	3474	2743	47949
		T	14981	11567	8426	5644	4037	3294	
1990/91		R	1948	1619	1348	847	646	626	
	15800	P	15800	12434	9254	6418	4459	3149	58600
		T	17748	14053	10602	7335	5105	3775	

Graph 1. Growth of enrolment in primary education - Rural zone of Ed-Dueim District 1980/81 - 1990/91



EXERCISE N° VIII

NORMS AND STANDARDS FOR JUNIOR SECONDARY SCHOOLS

I. In the city of Shabasha which forms part of the semi-urban zone of Ed-Dueim District, there was 191 pupils in the sixth grade of primary education in 1980/81. Assuming that :

- all these 191 pupils are living in a catchment area of 5 km radius
- there will be 45% of transition rate to grade I in junior secondary education for the year 1981/82
- the pupil/class ratio is 40 - 45 in junior secondary schools
- the grade to grade progression rate in junior secondary education is 95%
- there are no bussing and no boarding facilities provided

a) Compute the number of students and the number of sections in grades I, II and III in a full day junior secondary school.

II. The time-table for grades I to III is as follows:

Subject	Form		
	I	II	III
Religion	4	4	4
Arabic	9	9	9
English	9	9	9
Mathematics	6	6	6
Science	4	4	4
Geography	3	3	3
History	2	2	2
Civics & Social Sciences	1	1	1
Physical education	1	1	1
Total	39	39	39

a) Compute the total number of teachers required for a co-educational junior secondary school and the corresponding pupil/teacher ratio assuming that the :

- Teacher work load = 24 periods per week
- Professor of religion can teach arabic also
- Professor of history can teach geography, civics and social sciences

b) Compute the number of equivalent full-time teachers and the pupil/teacher ratio in full-time equivalent.

III. Teaching area and rate of utilization

a. Compute the number of general and multipurpose classrooms required assuming that :

- science is taught in a multipurpose classroom,
- all other subjects are taught in general classrooms except physical education,
- the maximum utilization of classrooms is 45 periods per week,
- the maximum time utilization rate of classrooms is 80%

Apply the formula $n = \frac{\Sigma c}{i \times p}$

n = number of classrooms required

c = total periods of teaching per week

i = maximum index or rate of utilization as given

p = maximum periods of utilization of one classroom per week

b. Compute the effective utilization rate of general and multipurpose classrooms. Apply the formula $i = \frac{\Sigma c}{nxp}$

c. Compute the teaching area required assuming that :

- a multipurpose classroom has an area of 80 sq. m
- a general classroom has an area of 60 sq. m

SOLUTION TO EXERCISE N° VIII

NORMS AND STANDARDS FOR JUNIOR SECONDARY SCHOOLS

I. Assuming a transition rate of 45% to junior secondary education in the city of Shabasha, there would be 86 pupils for grade I in a co-educational junior secondary in 1981/82. On the basis of 95% of grade to grade progression rate and of 40-45 pupil/class ratio, a full junior secondary school would have the following enrolments and sections.

Grade I	86 pupils	2 sections
II	82 "	2 "
III	78 "	2 "
Total	246 "	6 "

II. Number of teachers required

Subject	Total periods per week	Teaching classroom	Real N° of teachers	N° of teachers in full time equivalent
- Religion	24	G	4	3.25
- Arabic	54	G		
- English	54	G	3	2.25
- Mathematics	36	G	2	1.50
- Science	24	M	1	1
- Geography	18	G	2	1.50
- History	12	G		
- Civics & Social sciences	6	G		
- Physical education	6	outside	1	0.25
	234		13	9.75

a) Real number of teachers required = 13

b) Number of teachers in full-time equivalent = $\frac{246}{24}$ = 9.75

c) Pupil/teacher ratio

- in real number of teachers r = $\frac{246}{13}$ = 18.9
- in full-time equivalent r = $\frac{246}{9.75}$ = 25.2

III. Teaching area and rate of utilization

a) Requirements of rooms

- General $n = \frac{204}{0.8 \times 45} = 5.7$ or 6
- Multipurpose
- Multipurpose $n = \frac{24}{0.8 \times 45} = 0.7$ or 1

b) Effective rate of utilization

- For general classrooms $i = \frac{204}{6 \times 45} = 75.6\%$
- For multipurpose classroom $i = \frac{24}{1 \times 45} = 53.3\%$

c) Teaching area

- General 6 x 60 = = 360 sq.m
- Multipurpose 1 x 80 = 80 sq.m

Total 440 sq.m

EXERCISE N° IX

PROSPECTIVE PRIMARY SCHOOL MAP

(ARASHKOUL RURAL COUNCIL)

Arashkoul rural council is one of the six rural councils in the district of Ed-Dueim. The total population of the council (nomads included) is estimated to be 175950 inhabitants in 1980/81 (see table 1 of exercise N° II) of whom 109000 are settled in 81 villages and the remaining 66950 are considered as nomadic and semi-nomadic tribes people. The 7-12 age group in 1980/81 is estimated at 20012 for the settled population and 12292 for the nomads.

The primary school network in the council consists of 21 schools mainly concentrated in the villages that lie on the white Nile Western bank. Admissions in these 21 primary schools in 1980/81 are approximately 1059 pupils, which corresponds to a gross intake rate of 13.1%, the total enrolment at primary level is about 4276 which corresponds to a gross enrolment rate of 12,7% (see table 1 attached).

Assuming universal primary education should be attained by the year 2000, admission rate in the rural zone of Ed-Dueim district will increase to 40% by 1990/91 (alternative B in the exercise on enrolment projection). Enrolment in the rural zone has been projected at 58600 in 1990/91 which corresponds to an enrolment rate of 36%. We assume this enrolment rate should be the same in all rural councils included in the rural zone, among which Arashkoul rural council.

The Department of Statistics has prepared projection of the total population and of the 7-12 age group for the Arashkoul rural council and for each village in the council (see table 3).

According to these projections, primary school enrolment in the whole council should be 16069 in 1990/91 (36% of the 7-12 age group). We assume that this enrolment will be distributed in the following way :

1990/1991	7-12 age group	enrolment rate %	enrolment
Settled population	28090	50	14045
Nomadic tribes people	16545	12.2	2024
Total council	44635	36	16069

You are asked to prepare proposals for the expansion of the school network which will allow to enrol 50% of the settled school-age population and 12.2% of the nomadic school-age population, ensure equality

of opportunity all over the rural council and at the same time respect the national norms concerning the minimum school size.

1. Applying the 50% enrolment rate, estimate the potential enrolment in each village of the rural council by 1990/91 (table 3).

2. Using table 3 and map N° 1 , propose the location of new schools and the expansion of existing ones. The following norms and criteria should be applied.

- pupil can walk up to 5 km;
- whenever possible, schools of 300 pupils or more should be opened (6 sections of 50 pupils). This may require the opening of school enrolling children of several neighbouring villages (the catchment areas radius should however not exceed 5 km);
- all schools should have 3 teachers or more (3 sections of 50 pupils = 150 pupils);
- if a village has between 100 and 150 potential pupils and if it is not located within 5 km of an existing or proposed school, the opening of a school will be recommended. No school will be located if it does not have at least 100 pupils.

3. Compute for each of the proposed or existing schools:

- the number of sections assuming 50 to 55 pupils per section,
- the number of teachers required on the basis of 1.33 teacher per class (present regulation),
- the number of classrooms required excluding first the possibility of double shift and second allowing the use of double shift,
- make some suggestions on how to enrol nomads in the council,
- comment on the findings.

Table 1. Basic data on primary schools - Arashkoul Rural Council 1980/81

Name of school	Village N°	Type	Enrolment		N° of streams	Shifts	Teachers		Classrooms	
			Total	Girls			Total	Trained	Total	Needing maintenance
Arik	22	B	262	-	6	2	8	2	6	6
Arik	22	G	239	239	6	2	10	2	6	3
Sheikh El-Khanjar	1	C	72	34	2	1	2	2	2	2
El-Siferaya	27	"	327	156	6	1	7	-	6	2
Um Gidad	30	"	151	48	4	2	4	-	4	-
Arashkoul	20	"	110	44	6	2	9	3	6	-
Banunab	15	"	211	82	6	3	7	2	4	-
El-Shiteib	16	"	321	138	6	1	7	3	6	6
El-Turaa	9	B	144	-	6	1	7	4	6	6
"	9	G	193	193	6	1	6	4	6	4
Selake	7	C	130	39	3	1	5	3	3	3
El-Oshera	11	"	322	135	6	1	7	3	6	4
El-Laouta	34	C	233	85	6	1	7	4	6	3
El-Awamra	28	"	256	98	6	1	7	3	6	4
El-Manara	29	"	233	108	6	1	8	4	6	6

Table 1. (end)

Name of school	Village N°	Type	Enrolment		No. of streams	Shifts	Teachers		Classrooms	
			Total	Girls			Total	Trained	Total	Needing maintenance
El-Geteina	55	C	187	39	6	1	9	4	6	4
El-Humara	50	"	114	27	2	1	4	2	2	2
El-Halba	65	"	226	75	6	1	8	3	6	5
Wad Gabur	72	"	174	37	6	1	7	3	6	6
Khur El-Mutrag	33	"	166	16	4	1	4	-	4	4
Idd El-Oud	39	"	205	20	6	1	4	-	6	-
Total			4276	1613	105		137	51	109	70

Table 2. Projected population of Arashkoul - Rural Council by village, and Age (1990/91)

I. Settled population

Population Village	Age 7	Age 7 - 12
	Both sexes	Both sexes
1	110	455
2	35	141
3	56	221
4	27	108
5	28	117
6	27	108
7	73	302
8	31	129
9	264	1098
10	52	212
11	60	249
12	34	137
13	68	292
14	27	108
15	105	434
16	136	563
17	32	134
18	70	289
19	60	247
20	291	1210
21	101	418
22	499	2075
23	53	222
24	28	115
25	29	122
26	149	623
27	300	1253
28	68	292
29	92	386
30	21	89
31	61	254
32	85	355
33	80	367

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Table 2. (cntd.)

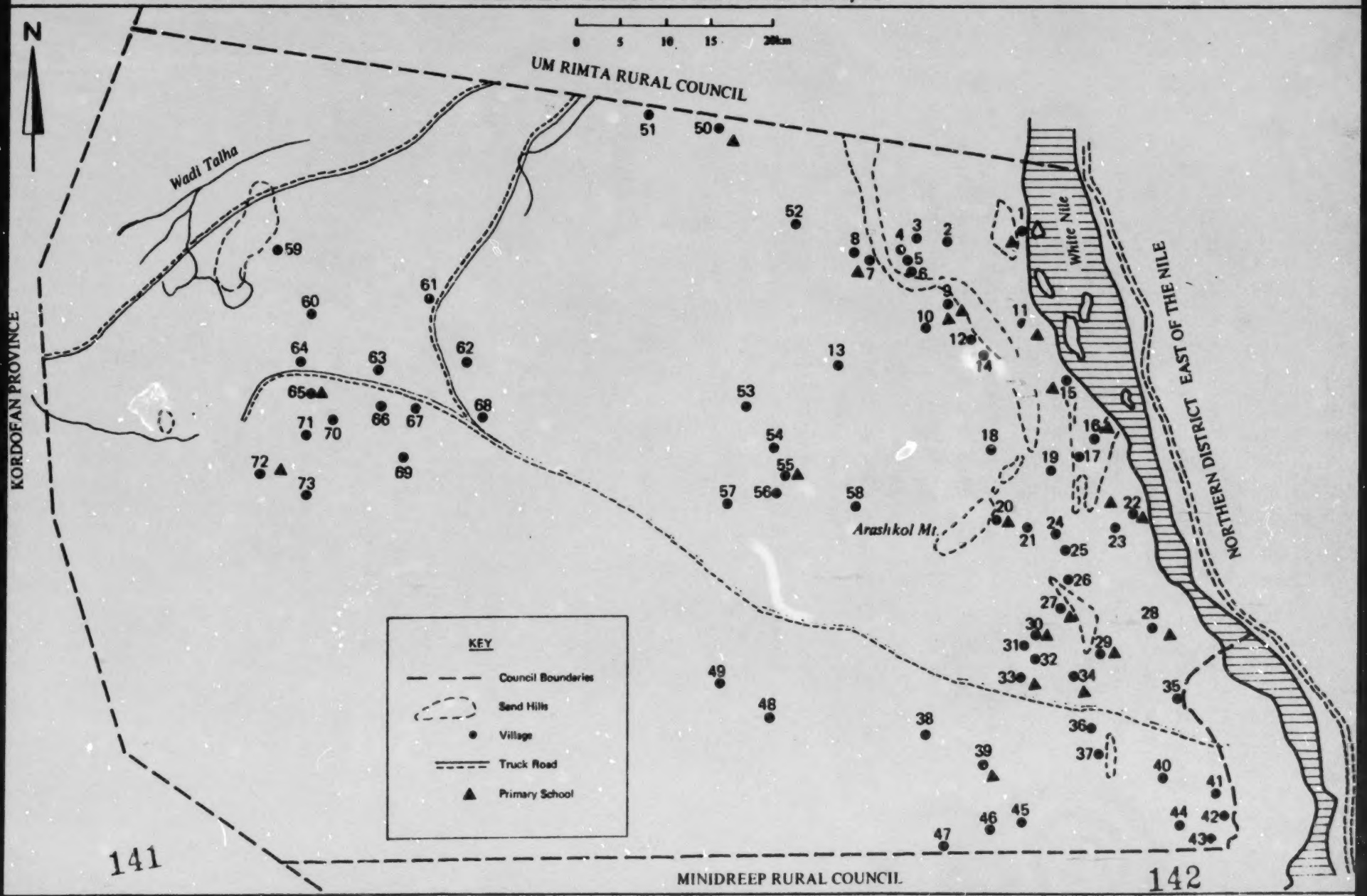
Population Village	Age 7	Age 7 - 12
	Both sexes	Both sexes
34	180	750
35	77	321
36	36	148
37	57	236
38	57	239
39	224	923
40	53	218
41	133	555
42	92	386
43	75	313
44	92	386
45	134	560
46	64	268
47	73	303
48	-	-
49	80	332
50	74	312
51	131	549
52	136	563
53	20	81
54	35	145
55	81	335
56	21	89
57	22	94
58	64	268
59	102	425
60	122	509
61	50	208
62	24	99
63	71	295
64	129	535
65	136	563
66	64	268

Table 2.(end)

Population Village	Age 7	Age 7 - 12
	Both sexes	Both sexes
67	184	770
68	20	82
69	52	215
70	46	187
71	151	629
72	87	363
73	81	355
74	38	155
75	47	196
76	49	201
77	49	201
78	85	355
79	-	-
80	-	-
Total	6750	28090
II. Nomads	4145	16545
Grand Total	10895	44635

MAP 1

ARASHKOL RURAL COUNCIL
PRIMARY SCHOOL NETWORK 1980/81



SOLUTION TO EXERCISE N° IX

PROSPECTIVE PRIMARY SCHOOL MAP

(ARASHKOUL RURAL COUNCIL)

If there is no dramtic change in the population distribution between the rural area where the populations are settled and the outlying area where the populations are mainly nomadic, and if there is no dramatic change among villages after 1980/81 - no special migration in particular - one can estimate the school-age population for 1990/91 as presented in table N° 2 of the simulation exercise.

And if the educational policy is to universalize primary education by the year 2000, the struggle for it must take into account the present situation where the schooling of nomadic and semi-nomadic tribes people is still very low. Therefore one of the corner-stones of this educational policy should be the reduction of disparities between social groups and zones as it appeared from the diagnosis and analysis. This would mean taking special measures in favour of nomadic populations. These measures could take different forms :

- try to settle down the nomadic and semi-nomadic tribes people in order to provide them with the same kind of educational services provided to settled population in the villages. Such a measure could encounter many difficulties to be implemented, as many tribes could refuse it;

- try to create mobile schools moving with the tribes from one place to another. The teachers who would teach in these mobile schools could be taken essentially from the tribes themselves and trained adequately;

- provide boarding facilities at least to start with as a temporary solution for putting down the adequate long-term solutions.

Any of these measures would necessitate further in-depth studies about the various degrees and patterns of nomadism which, as a matter of fact, tend to merge into one another, in order to take the specific measures adapted to the pattern of life of nomadic tribes. Meanwhile, it seems uneven to continue with the same trends, where the emphasis in educational development is mainly put in general on urban areas as against rural areas and on settled population as against nomadic population in the rural areas themselves.

As far as the primary schooling of the settled population in the 81 villages of Arashkoul Rural Council is concerned, the proposals for reorganizing the corresponding primary school network imply also an inflexion on the existing supply policy of educational services. This inflexion would mean more emphasis to be put on developing primary education in the villages located in the outlying area on one hand, and a reorganization policy aiming at a better utilization of available resources in the reorganized school network on the other hand.

The proposals concerning the location of new schools, the expansion of existing ones and the computation of requirements in terms of sections, teachers and classrooms are given in map N° 1 and table N° 2. It appears from these proposals and calculations that, in order to achieve 50% of enrolment in the years 1990/91 for the 7-12 school-age population settled in the 81 villages of Arashkoul Rural Council, we need a large number of classrooms to be built and a large number of teachers to be trained. However, this large number of classrooms could be reduced by more than 76% of the system of double shift is introduced, provided that the norm of 50-55 pupils per section is respected.

The problem is to see to what extent the teacher training system in the region is in a position to produce the sufficient number of trained teachers and to train on the job those who are untrained.

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Table 1. Projected school-age of Arashkoul - Rural Council by village, and % to be enrolled (1990/91)

I. Settled population

Population Village	Age 7	Age 7 - 12	Nos. to be enrolled
	Both sexes	Both sexes	
1	110	455	228
2	35	141	71
3	56	221	111
4	27	108	54
5	28	117	59
6	27	108	54
7	73	302	151
8	31	129	65
9	264	1098	549
10	52	212	106
11	60	249	125
12	34	137	69
13	68	292	146
14	27	108	54
15	105	434	217
16	136	563	282
17	32	134	67
18	70	289	145
19	60	247	124
20	291	1210	605
21	101	418	209
22	499	2075	1038
23	53	222	111
24	28	115	58
25	29	122	61
26	149	623	312
27	300	1253	627
28	68	292	146
29	92	386	193
30	21	89	45
31	61	254	127
32	85	355	178
33	80	365	184

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Table 1. (cntd.)

Population Village	Age 7	Age 7 - 12	Nos. to be enrolled
	Both sexes	Both sexes	
34	180	750	375
35	77	321	161
36	36	148	74
37	57	236	118
38	57	239	120
39	224	923	462
40	53	218	109
41	133	555	278
42	92	386	193
43	75	313	157
44	92	386	193
45	134	560	280
46	64	268	134
47	73	303	152
48	-	-	-
49	80	332	166
50	74	312	156
51	131	549	275
52	136	563	282
53	20	81	41
54	35	145	73
55	81	335	168
56	21	89	45
57	22	94	47
58	64	268	134
59	102	425	213
60	122	509	255
61	50	208	104
62	24	99	50
63	71	295	148
64	129	535	268
65	136	563	282
66	64	268	134

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Table 1.(end)

Population Village	Age 7	Age 7 - 12	Nos.to be enrolled
	Both sexes	Both sexes	
67	184	770	385
68	20	82	41
69	52	215	108
70	46	187	94
71	151	629	315
72	87	363	182
73	81	355	178
74	38	155	78
75	47	196	98
76	49	201	101
77	49	201	101
78	85	355	178
79	-	-	-
80	-	-	-
Total	6750	28090	14045
II. Nomads	4145	16545	2024
Grand Total	10895	44635	16069

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Table 2. Reorganizing of primary school network in Arashkoul Rural Council 1990/91

Village & School	Catchment area	School(s) enrolment in 1980/81	Enrolment in 1990/91	No.of sections	No.of teachers	No.of classrooms 1 shift	No.of classrooms 2 shifts	Comments
1	1	72 C	228	5	7	5	3	2 existing classrooms. 1 new cl.room needed if double shift introduced. 3 cl.rooms needed otherwise plus maintenance.
3	2-3-4-5-6	-	349	7	10	7	4	4 to 7 classrooms to be built
7	7-8	130 C	216	4	5	5	3	Distance with village 52 should be checked on the field.If distance between village 7 & 52 is less or equal to 5 kms for the majority of pupils, children of villages 8 & 7 could be sent to school 52. Otherwise, no expansion needed if double shift introduced or 2 new cl.rooms built
9	9-10-12-14	144 B 193 G	778	15	20	15	(8)	2 existing schools with 12 cl. rooms, no construction required if double shift introduced, otherwise 3 cl.rooms needed plus maintenance
11	11	322 C	320 (125)	6	8	6	(3)	The present school has 6 cl.rooms, no construction needed. Enrolment will probably be maintained at 320 or slightly increased in the present facilities.

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Table 3 Reorganizing of primary school network in Arashkoul Rural Council 1990/91 (cntd.)

Village & School	Catchment area	School(s) enrolment in 1980/81	Enrolment in 1990/91	No.of sections	No.of teachers	No.of classrooms 1 shift	2 shifts	Comments
13	13	-	146	3	4	3	2	2 to 3 cl.rooms to be built
15	15	211 C	217	4	5	4	(2)	The present school has 4 cl. rooms. No construction needed. Enrolment to be maintained at present level or slightly increased. Two teachers to be transferred.
16	16-17	321 C	349	7	9	7	4	Present school has 6 cl.rooms. No construction needed, if double shift introduced, otherwise 1 classroom is needed. Enrolment to be maintained or slightly increased.
18	18-19	-	269	5	7	5	3	3 to 5 cl.rooms to be built.
20	20-21	110 C	814	15	20	15	8	Existing school has 6 cl.rooms. 2 new cl.rooms needed if double shift is introduced, or 9 needed otherwise.
22	22-23	262 B 239 G	1149	21	28	21	11	No new cl.room needed if double shift is introduced. 9 are needed otherwise plus maintenance.
26	24-25-26	-	431	8	11	8	4	4 to 8 cl.rooms needed.
27	27	327 C	627	12	16	12	6	No new cl.room needed if double shift is introduced. 6 new cl. rooms are needed otherwise plus maintenance.
28	28-35	256 C	307	5 to 6	7	5 to 6	(3)	Present school has 6 cl.rooms. No new construction required.
29	29	233 C	233 (193)	4	5	4	(2)	Present school has 6 cl.rooms; no construction needed. Enrolment to be maintained at present level or slightly increased. 3 teachers to be transferred.
30	30-31-32	151 C	350	7	9	7	4	No new cl.room needed if double shift is introduced. 3 cl.rooms are needed otherwise

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Table 2. Reorganizing of primary school network in Arashkoul Rural Council 1990/91 (cntd.)

Village & School	Catchment area	School(s) enrolment in 1980/81	Enrolment in 1990/91	No.of sections	No.of teachers	No.of class-rooms 1 shift	2 shifts	Comments
33	33	166	184	4	5	4	(4)	Present school has 4 cl.rooms, no expansion required; maintenance needed
34	34	233 C	375	7	9	7	4	Present school has 6 cl.rooms. No expansion needed if double shift is introduced. 1 new cl. room needed otherwise plus maintenance
37	36-37	_	192	4	5	4	2	2 to 4 cl.rooms needed
39	38-39	205 C	582	11	15	11	6	6 cl.rooms available - No new ones required with double shift. 5 needed otherwise.
41	41-42	-	471	9	12	9	5	5 to 9 cl.rooms needed
44	40-43-44	-	459	9	12	9	5	5 to 9 cl.rooms needed
46	45-46-47	-	566	11	15	11	6	6 to 11 cl.rooms needed
49	49	-	166	3	4	3	2	2 to 3 cl.rooms to be built
50	50	114	156	3	4	3	2	existing school has 2 cl.rooms. No expansion needed with double shift, one cl.room needed otherwise plus maintenance.

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Table 2. Reorganizing of primary school network in Arashkou. Rural Council 1990/91

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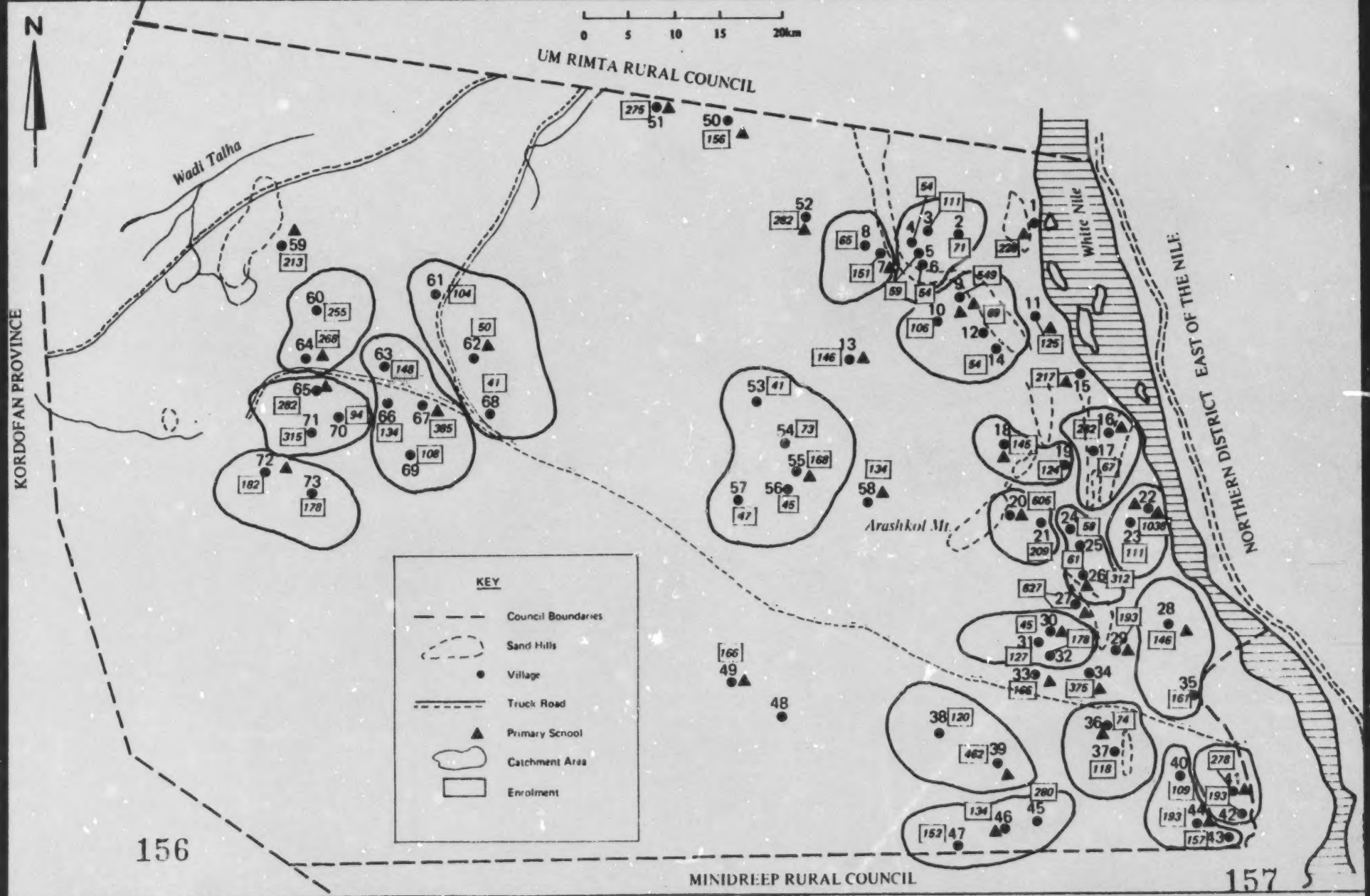
Village & School	Catchment area	School(s) enrolment in 1980/81	Enrolment in 1990/91	No.of sections	No.of teachers	No.of classrooms 1 shift	No.of classrooms 2 shifts	Comments
51	51	-	275	5	7	5	3	3 to 5 new cl.rooms needed
52	52	-	282	6	8	6	3	3 to 6 cl.rooms needed
55	53-54-55-56-57	187 C	374	7	9	7	4	Present school has 6 cl.rooms; no expansion needed if double shift introduced. 1 cl.room is needed otherwise plus maintenance
58	58	-	134	3	4	3	2	2 to 3 cl.rooms needed
59	59	-	213	4	5	4	2	2 to 4 cl.rooms needed
62	61-62-68	-	195	4	5	4	2	2 to 4 cl.rooms needed
64	60-64	-	523	10	13	10	5	5 to 10 cl.rooms needed
65	65-70-71	226	691	13	17	13	7	Existing school has 6 rooms, 1 cl.room is needed if double shift is introduced. With single shift 7 more cl.rooms would be needed, plus maintenance
67	63-66-67-69	-	775	14	19	14	7	7 to 14 cl.rooms needed
72	72-73	174	360	7	9	7	4	Existing school has 6 cl.rooms; no expansion is needed if double shift is introduced; 1 cl.room is needed otherwise plus maintenance.
Total		4276	13756	262	348	262	145	

N.B. Villages 74 to 81 do not appear on the map.

MAP 1

ARASHKOL RURAL COUNCIL
PRIMARY SCHOOL NETWORK 1990/91



ANNEXES

Annex I to report

Closing speech by the Minister of Education & Guidance, Sudan

Distinguished guests, ladies and gentlemen,

I am delighted to have the opportunity this evening to formally close this three-week intensive training course on microplanning and school mapping. First of all, let me start by conveying my Government's appreciation to the Director of the International Institute for Educational Planning for having accepted to organize this national training course in order to help us in the struggle for universalizing primary education in the Sudan. Our thanks go specially to Mr H. Hajjar, Miss F. Caillods and Mr Ta Ngoc Châu who, on behalf of the Institute, participated in organizing and conducting this training course. I also wish to welcome Mr C.Tibi who arrived to-day in Khartoum in order to start with us a new study on educational costs and financing.

You might all know that the history of cooperation between the IIEP and the Sudan is a long standing one. It covered through various stages various aspects of research and training on higher education and employment, educational administration, education and agricultural development and planning education at the local level for the purpose of universalizing primary schooling. This trend of cooperation will, I hope, continue to develop in the future as it is the case now with the new project on educational costs and financing.

Ladies and gentlemen,

I cannot close my speech without saying a few words on the training course and its usefulness for the Sudan.

You might all know that the Sudan has embarked on a long regionalization and decentralization process which affects first of all educational administration. And you might also all know that the educational strategy of the Sudan is aiming at achieving universal primary education and eradicating illiteracy by the end of 1990. On the basis of this long-term strategy the Sudanese Government prepared its VIth Year Plan for economic and social development (1977/78-1982/83) with the objective of raising the enrolment rate in primary education from 35% to 60% in 1983 and reducing the disparities between the different regions and provinces of the Sudan as well as between boys and girls.

In spite of their importance and nobleness these objectives have not been implemented because of many difficulties related to scarce available resources and to the high increase in educational costs. And now we are in the process of preparing a new development plan for education with the aim of universalizing primary education and eradicating illiteracy by the year 2000 instead of 1990 and setting up the modalities that will ensure the implementation of these new objectives. The challenge is getting more difficult with the necessity to expand at the same time our technical and vocational education to meet the requirements of our economic and social development and increasing the efficiency of our educational system and decreasing its costs.

In order to implement all these objectives, taking into account the scarcity of our resources, and in line with our regionalization and decentralization policy, we have to call on planning in a scientific way. However, this planning could not be realistic unless it takes place at the grass roots level where education is really taking place. With this in mind, we requested the IIEP to organize this course in order to build up our capacities of planning at the regional and sub-regional levels.

I understand that your course comprised the analysis of the educational system in one district of the White Nile Province and the preparation of the prospective school map for this district with the aim of achieving UPE by the year 2000, as it comprised also the preparation of regional projects by the participants attending the course. This would mean for us that these techniques and methods of planning education at the local level in which the participants have been trained, will be a starting point in a long process where the regional representatives have a major role to play. On this occasion I would like to assure the participants of the support they will be obtaining from the central level in preparing their regional projects and putting them into execution, with the steady hope that the IIEP will continue to help us in the future.

Once again, I would like to express my Government's appreciation to the International Institute for Educational Planning for the continuing support it provided to the Sudan and to convey my special thanks to the IIEP professors who participate in this course. I would also like to convey my thanks to the organizers of this course from the Ministry of Education, to the Director of the Teacher Training Institute at Omdurman where the course took place and to the participants themselves for their active cooperation, wishing them every success in their task.

With these words I declared the course closed.

Thank you.

Annex II to Report

IIEP/ITC36/Information
Paris 15 October 1982
Original : English

WORKING DOCUMENT

INTENSIVE COURSE ON MICROPLANNING AND SCHOOL MAPPING

KHARTOUM, DEMOCRATIC REPUBLIC OF SUDAN

(8 - 26 January 1983)

INFORMATION

This document has been prepared for the participants in the Intensive Training Course on Microplanning and School Mapping, organized in Khartoum, Sudan, by the Ministry of Education and Guidance of the Sudan and the International Institute for Educational Planning (Unesco) Paris

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General information on the Intensive Course on Microplanning and School Mapping and Data necessary for the preparation of regional projects.

I. COURSE OBJECTIVES

The course has three main objectives :

- to show the role of microplanning and school mapping in the overall planning of education;

- to train participants in the various techniques involved in microplanning and school mapping;

- to help each participant prepare an actual project for introducing microplanning and school mapping in his/her region.

The course is intended to help participants to :

- better identify the various factors needed to be taken into account in the preparation of a school map and a microplan of education;

- increase their knowledge of certain techniques (enrolment projections, demography, cost effectiveness analysis) which are used in the preparation of the school map and microplan as well as to plan the actual organization of their work;

- acquire training in certain statistical methods (questionnaire building, carrying out surveys, analysis of maps..).

II. PROVISIONAL PROGRAMME OF THE COURSE

It can be seen from the attached programme that the course includes three main activities carried out in parallel :

(1) Discussions, lectures, sessions
(2) Exercises, statistical examples
(3) Preparation of regional projects

To help you prepare yourself for activities (1) and (2), a copy of the book prepared by J. Hallak on "Planning the location of schools" has been sent to your office under separate cover. You are requested to study it prior to your arrival in Khartoum. Kindly bring it with you to the course for reference purposes as no other copies will be available for distribution during the course.

III. PREPARATION OF REGIONAL PROJECTS

This activity is an essential task for all the participants as it offers the opportunity to study the practical conditions for introducing microplanning and school mapping in the various regions represented. With this purpose in view, you will be analysing in detail the organization of the school network, the coverage and the efficiency of the system for one or two levels of education (primary, junior secondary, higher secondary) in one particular province or district that you should select. In order to perform this task you should bring with you :

- detailed maps showing relief, road network, location of cities, boundaries of provinces and districts, enumeration areas and the exact location of schools;

- data on economic activities, employment, various socio-economic centres;

- demographic data giving as much detail as possible on :

  . distribution of population by district, local councils and villages;
  . birth rates, death rates, migration and density;

- detailed information about the process of resource allocation between provinces, districts and local councils (teachers & buildings) as well as administrative structures and procedures.

- detailed information on the present school network, school by school showing :

  . enrolments by grade, sex and age for two consecutive school years,
  . teachers by qualification and training,
  . school facilities and equipment.

In order to help you carefully collect the data required, the table herebelow gives, by way of illustration, a list of information and the sources from which it may be obtained.

Data required for the preparation of regional projects

Type of information	Specific data to be collected	Sources	
		Ministry of Education	Other Ministries or bodies
General	1. Educational system: structure and functioning	Directorate of Strategy & Planning	
	2. Organigram of the Ministry of Education	"	
	3. Structure of the provincial education offices	Office of the Executive Asst. Commissioner	
	4. Educational reform projects	Strategy and Planning Directorate	
	5. Specific objectives of current educational plan and/or future educational plan	"	
	6. Methods of decision-making for the implementation of the school map	" or school map division	
	7. Rules and norms	Strategy & Planning Directorate or School Construction Division	
Region selected	1. Detailed map (largest scale possible) showing relief, road network, districts towns, and villages..		Ministry of Public Works or Transport
	2. Map showing the location of present school network (marked on a tracing of map 1. above)	Office of the Executive Asst. Commissioner	
	3. Demographic data (distribution of population by age or age-group for each district/village/neighbourhood). Statistics on death rates, birth rates, migration, population density.		Ministry of National Planning Department of Statistics

Type of information	Specific data to be collected	Sources	
		Ministry of Education	Other Ministries or bodies
Region selected	4. Data by school on the present school network giving :		
	(a) pupils enrolled during the last 3 years by grade, age, sex and repeaters by grade	Regional Planning Office	
	(b) Teachers by sex and level of qualification	"	
	(c) School building by : date of construction and area, number of classrooms (general and specialized)and their condition.	"	
	5. Economic data		Ministry of Economic Affairs

IV. OTHER

You will be requested at the beginning of the course to make a presentation on the educational problems prevailing in your region. Any information concerning the region you are representing is an asset for this purpose.

If you have your own calculator, kindly bring it with you to the course. You will need it in doing practical exercises and preparing regional projects.

Good Luck!

Annex III to Report

IIEP/ITC36/List of participants
Paris, 17 March 1983

Intensive Course on Microplanning and School Mapping
Khartoum, Democratic Republic of Sudan
(8 - 26 January 1983)

No.	Name	Region	Position
1	Mubarak Saeed Muhammad	Darfur	Director, Primary Schools Directorate
2	Hamid Hamad El-Zaylai	"	Director, Planning Directorate, Statistics Section
3	Malik Mahjoub Muhammad Khair	"	Secondary School Principal
4	Muhammad Osman El-Khodr	"	Head of Arabic Department - Secondary Schools Directorate
5	Abd El-Karim El-Amine	"	Ed. Supervisor, Intermediate Schools Direct.
6	Hassan Ahmad El-Amir	Kordofan	Technical Inspector, Primary Schools Direct.
7	El-Hadi Muhammad El-Mowag	"	Chief Technical Inspector of English, Secondary Schools Directorate
8	Malik Ibrahim Haydoub	"	Chief Educational Supervisor, Intermediate Schools Directorate
9	Makki Hanafi Mustafa	"	Director, Planning Directorate
10	Abbas Ahmad Muhammad	Central	Statistics Officer, Statistics Section, Planning Directorate
11	Ahmad Abd El-Aziz Muhammad	"	Principal, Teacher Training Institute
12	Khalid Osman Mustafa	"	Ed. Supervisor, Intermediate Schools Direct.
13	Obeid Abdallah Rahmatallah	"	Statistics Officer, St.Section, Pl.Direct.
14	Abd El-Rahman El-Sayyid	Eastern	Assistant Director, Planning Directorate
15	Musa Adam Ahmad	"	Statistics Officer, Statistics Section, Planning Directorate
16	Muhammad Yassin El-Hajj	"	Statistics Officer, Statistics Section, Planning Directorate
17	Hashim Saad Ahmad	"	Ed.Supervisor, Primary Schools Directorate
18	Muhammad Ahmad Abdallah	Northern	Statistics Officer, Statistics Section, Planning Directorate
19	Abbas Ibrahim Abdallah	"	Statistics Officer,St. Section, Pl. Direct.
20	Bashir Ibrahim Ajouba	"	Assistant Director, Primary Schools Direct.
21	Muhammad Osman El-Sharif	Khartoum Province	Statistics Officer, Statistics Section, Planning Directorate
22	Siddiq Abd El-Sadiq	"	Technical Inspector, Primary Schools Direct.
23	Abdallah Abd El-Rahim	"	ditto
24	El-Hadi Adam Muhammad	"	Ed. Supervisor, Primary Schools Direct.
25	Hanim Fadl Nasir	"	Technical Inspector, Primary Sch., Direct.
26	Buthayna Bakir Abdallah	"	Ed. Supervisor, Primary Sch., Direct.
27	Muhammad El-Amine El-Ageb	"	Chief District Ed. Supervisor, Intermediate School Directorate
28	Abdallah El-Baqir Abd El-Halim	"	Director, Statistics Section, Planning Direct
29	Layla Tana Salih	Central Ministry of Education	Assistant Director, Planning Section, Strategy & Planning Directorate
30	Abd El-Qadir Muhammad El-Hajj	"	Planning Senior Officer, Pl. Section, Strategy & Planning Directorate
31	Hassan Abd El-Ghafour	"	Statistics Officer, Statistics Section, Planning Directorate
32	Abd El-Azim El-Nourani	"	Director, Evaluation & Research Unit Literacy & Adult Education Directorate
33	Bakheita Osman Hassan	"	Officer, Educational Evaluation Directorate

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PROGRAMME

Saturday 8/1/1983		
8.00 - 9.00 am	Registration	
10.00 - 11.00 am	Inauguration of the course	
11.30 - 1.00 pm	Lecture I: Sudanese educational policy, planning and administration	Muhammad Kamal Badr
1.00 - 3.00 pm	Lecture II: Educational planning and school mapping - General introduction	H. Hajjar
Sunday 9/1/1983		
8.00 - 11.00 am	Lecture III: Statistical units and parameters for diagnosis	Ta Ngoc Châu
12.00 - 3.00 pm	Regional presentation by participants	Participants
Monday 10/1/1983		
8.00 - 9.30 am	Exercise I : Collection of data	Faculty
9.30 - 11.00 am	Exercise II : Identification of homogeneous zones	"
12.00 - 1.30 pm	Exercise II: continued	"
1.30 - 3.00 pm	Discussion on exercise II	H. Hajjar
Tuesday 11/1/1983		
8.00 - 9.30 am	Lecture IV : Demographic data and analysis of school enrolment	H. Hajjar
9.30 - 11.00 am	Exercise III: Diagnosis of enrolment (primary)	Faculty
12.00 - 1.30 pm	Exercise III: continued	"
1.30 - 3.00 pm	Discussion on exercise III	Ta Ngoc Châu
Wednesday 12/1/1983		
8.00 - 11.00 am	Exercise IV : Diagnosis of enrolment (secondary)	Faculty
12.00 - 1.00 pm	Exercise IV : continued	"
1.00 - 3.00 pm	Discussion on exercise IV	Ta Ngoc Châu
Thursday 13/1/1983		
8.00 - 9.30 am	Lecture V: Diagnosis of the quality of educational services	H. Hajjar
9.30 - 11.00 am	Exercise V : Diagnosis of staffing conditions	Faculty
12.00 - 1.00 pm	Exercise V : continued	"

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Saturday 15/1/1983		
8.00 - 9.30 am	Discussion on exercise V	Ta Ngoc Châu
9.30 - 11.00 am	Exercise VI : Diagnosis of facilities	Faculty
12.00 - 1.30 pm	Exercise VI : continued	"
1.30 - 3.00 pm	Discussion on exercise VI	H. Hajjar
Sunday 16/1/1983		
8.00 - 10.00 am	Lecture VI : An introduction to cost concepts	Ta Ngoc Châu
10.00 - 11.00 am	Exercise VII : Educational costs	Faculty
12.00 - 1.30 pm	Exercise VII : continued	"
13.30 - 3.00 pm	Discussion on exercise VII	Ta Ngoc Châu
Monday 17/1/1983		
8.00 - 11.00 am	Consultation on regional projects	Faculty
12.00 - 3.00 pm	Discussion on the questionnaire for data collection	"
Tuesday 18/1/1983		
8.00 - 10.00 am	Lecture VII : Projection of enrolments	F. Caillods
10.00 - 11.00 am	Exercise VIII : Projection of enrolments (primary)	Faculty
12.00 - 2.00 pm	Exercise VIII : continued	"
2.00 - 3.00 pm	Discussion on exercise VIII	F.Caillods
Wednesday 19/1/1983		
8.00 - 11.00 am	Consultation on regional projects	Faculty
12.00 - 2.00 pm	Lecture VIII : Norms, standards and catchment area	H. Hajjar
Thursday 20/1/1983		
8.00 - 10.00 am	Exercise IX : Norms, standards and catchment area (secondary)	Faculty
10.00 - 11.00 am	Discussion on exercise IX	H. Hajjar
12.00 - 2.00 pm	Consultation on regional projects	Faculty
Saturday 22/1/1983		
8.00 - 10.00 am	Lecture IX : Prospective school map and micropian	F.Caillods
10.00 - 11.00 am	Exercise X : Prospective school map (primary)	Faculty
12.00 - 3.00 pm	Exercise X : continued	"

Sunday 23/1/1983

8.00 - 11.00 am	Discussion on exercise X	F. Caillods
12.00 - 3.00 pm	Presentation of regional projects	Participants

Monday 24/1/1983

8.00 - 1.00 pm	Visit to schools and collection of data	Participants and Faculty
1.30 - 3.00 pm	Discussion on collection of data	Faculty

Tuesday 25/1/1983

8.00 - 9.30 am	Lecture X : Generalization and administrative procedures in school mapping	F.Caillods
9.30 - 11.00 am	How to implement the school map in the Sudan?	Faculty, Central Planning Unit and Participants
12.00 - 13.30 pm	Oral evaluation of the course	
6.00 - 8.00 pm	Closing session	

EVALUATION QUESTIONNAIRE

This course on microplanning and school mapping was organized by the Ministry of Education and Guidance, Sudan, and the International Institute for Educational Planning, Paris (UNESCO).

We would greatly appreciate your comments with a view to helping us improve the organization of future courses.

I. BEFORE THE COURSE

1. Was the material sent to you sufficiently in advance in order to allow you to prepare for the course?

Yes	No	N.R.
6,5%	93,5%	-

Please comment.
- have received only the invitation to attend the course and was not informed of the material to bring to the course (12)
- have been invited to attend the course 2 days after it started (2)
- information on materials to be collected for the course received 2 weeks before the course (6) on one week only (9), so not enough time to collect data

2. How many months in advance would you have liked to have been informed of your admission to this course? :

- 1 month : 51,6%
- 2 months : 25,8%
- 3 months : 6,5%
- 4 months or more : 9,7%
- N.R. : 6,4%

II. DURING THE COURSE

3. On the whole, how would you rate this course? :

- very poor	
- poor	
- average	3,3%
- good	41,9%
- very good	54,8%

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4. The course consisted of a succession of lectures and exercises on various topics :

	How did you find the content of the sessions ?			Was the time devoted to the topic :		
	Very useful	Useful	Not very useful	Insuffi-cient	Suffi-cient	Too much
Lectures	74.2%	25.8%	-	31%	65.5%	3.5%
Practical exercises	77.4%	19.4%	3.2%	27.6%	72.4%	-
Preparation of regional projects	67.7%	19.4%	12.9%	75.9%	24.1%	-
General introduction to micro- and macroplanning	71%	29%	-	17.2%	82.8%	-
Sudanese educational policy and planning	58.1%	32.2%	9.7%	17.2%	79.3%	3.5%
Statistical units & parameters	74.2%	25.8%	-	24.1%	69%	6.9%
Diagnosis of enrolment	74.2%	22.6%	3.2%	24.1%	72.4%	3.5%
Diagnosis of teachers	77.4%	19.4%	3.2%	13.7%	82.8%	3.5%
Diagnosis of facilities	71%	29%	-	13.8%	65.5%	20.7%
Introduction to cost concepts	67.7%	32.3%	-	51.7%	44.8%	3.5%
Projection of enrolments	74.2%	22.6%	3.2%	17.2%	75.9%	6.9%
Norms, standards & catchment areas	80.6%	19.4%	-	24.1%	72.4%	3.5%
Prospective school map	87.1%	9.7%	3.2%	37.9%	58.6%	3.5%
Generalization & administrative procedures	74.2%	25.8%	-	24.1%	75.9%	-

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5. On the whole, was the material presented to you in lectures and exercises relevant to the problems in your region/country ?

- irrelevant 3.2%
- relevant 71%
- very relevant 25.8%

6. Given the range of subject covered, did you find the length of the course :

- too short 19.3%
- short 61.4%
- adequate 19.3%
- too long -

7. Is there any other subject you would have liked us to cover during the course ? Please specify.

- Data collection (4) - Technical & vocational education (3)
- Planning out-of-school education (2) - Educational planning & educational statistics (4
- Self-help policy and its role in UPE (3)
- Teacher training and migration of qualified teachers to oil-producing countries (5
- Allocation of resources (3)
- Curriculum development (5)

8. How did you find relations between participants and

	Bad	Average	Good	N.R.
- teaching staff	-	-	100%	-
- non-teaching staff	3.2%	25.8%	64.5%	6.5%

9. How did you find the arrangements with respect to :

- the lecture room : - Fair: 16.1% - Good: 83.9%
- other working rooms :- Unconvenient: 6.4% Fair: 12.9% - Good: 35.5% - N.R. 45.2%
- accommodation : All those who have been lodged in the Teacher Training Institute (20 participants coming from the regions) found the accommodation not convenient and uncomfortable.

9. (Cont'd.)

Comments :

III. ORGANIZATION OF FUTURE COURSES

10. Assuming that another course is to be organized in the future, what, in your view, would be the best formula ?

- International (countries from all over the world)	16.1%
- Regional (e.g. East Africa, Arab Countries)	58.1%
- National	19.4%
- Regional	6.4%

11. How much time should be devoted to such a course ?

- less than 2 weeks	-
- 2 weeks	-
- 3 weeks	12.9%
- one month	38.7%
- two months	48.4%

12. On what other topics (apart from school mapping and microplanning) do you think it would be useful to organize a training course ?

- Curriculum development and evaluation	5
- Teacher training programmes	5
- Educational administration	4
- Educational statistics and data collection	3
- Educational costs	3
- School inspection techniques	3
- Literary programmes and adult education	2
- How to improve the quality of educational services	2
- Rationalization of self-help	2
- General concepts of educational planning	2

13. Apart from other courses, what do you suggest IIEP could do to keep in touch with you (e.g. : sending you the list of publications ...)

- Sending IIEP publications (31)
- Organize follow-up courses (8)
- Follow-up missions to the different regions to evaluate implementation of school mapping (5
- Send information on other IIEP courses (9) and research activities (8)

14. Give your general comments on the course.

- Good and very useful course (25)
- Course too intensive (5) and too short (6)
- Not enough time for regional projects (22)
- Course would have been more successful if arabic language had been used (7)
- Course would have been organized in Khartoum rather than in Um Durman to avoid transportation problems (8)
- Ministry of Education should give more attention to accommodation (20) and financing (12) in the future.

15. Which region are you from?

Name : _____

(optional)

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Thank you.

Annex VI to Report

QUESTIONNAIRE FOR SURVEYING PRIMARY SCHOOLS

Ministry of Education and Guidance

Khartoum, Sudan

This questionnaire has been prepared for the participants in the Intensive Training Course on Microplanning and School Mapping in Omdurman from 8 to 26 January 1983, as a testing of survey instruments and data collection

I - SCHOOL IDENTIFICATION

1. Name of the School : _____

2. Type : Boys ☐ Girls ☐ Co-educational ☐
Complementary ☐

3. Location : Village _____ Local Council _____
District _____ Province _____

4. Status : Government ☐ Aided ☐
Private ☐

5. Number of school shifts 1 ☐ 2 ☐ 3 ☐

6. Number of sections by grade :

Grade	I	II	III	IV	V	VI	Total
Section							

II. 1981/82 Enrolment

Grade / Enrolment	I	II	III	IV	V	VI	Total
B							
G							
T							

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III 1982/83 Enrolment

Grade / Enrolment		I	II	III	IV	V	VI	Total
B								
G								
T								
Repeaters	B							
	G							
	T							

IV Attendance on the day of Survey

Grade / Number of pupils attending the day of Survey		I	II	III	IV	V	VI	Total
	B							
	G							
	T							

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V. Distribution of pupils by age

Grade and sex / age	I			II			III			IV			V			VI			Total		
	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T
≤6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
>14																					
Total																					

VI. Travelling distance and means of transportation for pupils

Grade	Section	Number of pupils according to distance between home and school								
		Less than 2 km	2-4 Km			4-6 km			Total	
			Foot	Bus	Car	Foot	Bus	Car		
I	1.									
	2									
II	1									
	2									
III	1									
	2									
IV	1									
	2									
V	1									
	2									
VI	1									
	2									
Total										

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VII. Teaching staff

No.	Name of teacher	Sex M	Sex F	Educational level	Training: Teacher Training Institute	Training: On the job	Training: Untrained	No. of yrs of ex-perience	No. of periods taught per wk	Subjects taught, class and section

137.

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VIII. Teaching premises Shifts (if any) 1st shift From _____ to _____ No. of Sect. concerned _____

a) General classrooms 2nd shift From _____ to _____ No. of Sect. concerned _____

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Classroom Number	Grade and sections concerned	ROOMS Length (m)	Width (m)	Area (m^2)	State (1) Very bad	Bad	Regular	Good	Number of seating places
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									

1) very bad = need reconstruction; bad = need heavy repair; regular = need normal maintenance and good = need no repair

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b) Other premises

Specialized classrooms (Specify)	No.	Area in m2 Length (m)	Width (m)	Surface (m2)	State Very Bad	Regular	Good
1.							
2.							
3.							
Headmasters' Office							
Teachers' Office							
Storage room							

IX Services available in the school

Item	Yes	No.	Specify
Water			
Electricity			
Latrines			
First Aid Box			
Field Sports			
Land available for expansion			
Library			
Other (Specify			

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X. Equipment and teaching materials available

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Grade and section number	Class-room number	Availability of Blackboard		Availability of Teachers' desk		Textbooks			Exercise Books			Pens & Pencils		
		Yes	No	Yes	No	None	Insufficient	Sufficient	None	Insufficient	Sufficient	None	Insufficient	Sufficient
I 1														
2														
II 1														
2														
III 1														
2														
IV 1														
2														
V 1														
2														
VI 1														
2														

Annex VI to Report

QUESTIONNAIRE FOR SURVEYING INTERMEDIATE SCHOOLS

Ministry of Education and Guidance

Khartoum, Sudan

This questionnaire has been prepared for the participants in the Intensive Training Course on Microplanning and School Mapping in Omdurman from 8 to 26 January 1983, as a testing of survey instruments and data collection

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I. School Identification

1. Name of the School : _____

2. Type : Boys ☐ Girls ☐ Day school ☐
Boarding school ☐ Day and Boarding school ☐

3. Location : Village _____ Local Council _____
District _____ Province _____

4. Status : Government ☐ Aided ☐ Private ☐

5. Number of school-shifts 1 ☐ 2 ☐

6. Number of sections by grade :

Grade	I	II	III	Total
Section				

II - 1981 - 1982 Enrolment

Grade / Enrolment	I	II	III	Total	
B					
G					
T					

III 1982 - 1983 Enrolment

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Grade Enrolment		I	II	III	Total	
B						
G						
T						
Repeaters	B					
	G					
	T					

IV. Attendance on the day of Survey

Grade		I	II	III	Total	
Number of pupils attending the day of survey	B					
	G					
	T					

V. Distribution of pupils by age

Grade and Sex / Age	I			II			III			Total			
	M	F	T	M	F	T	M	F	T	M	F	T	
<12													
13													
14													
15													
16													
17													
>17													
Total							193						

VI. Travelling distance and means of transportation for day-pupils

Grade	Section	Number of pupils according to distance between home and school									Total	
		Less than 3 km	3-6				more than 6					
			Foot	Bus	Car	Bicycle	Foot	Bus	Car	Bicycle		
I	1											
	2											
	3											
II	1											
	2											
	3											
III	1											
	2											
	3											
Total												

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VII Number of boarding - pupils and their geographical Origin

If there are no boarding-pupils in the school move to question VIII

Geographical Origin of pupils			Number of boarding-pupils	
Local Council	District	Province		

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VIII Primary schools feeding grade one new admissions in 1982/83

	Name of the primary school	Government	Private	Distance from this primary school to the intermediate school	Number of new grade one pupils coming from this primary school in 1982/83

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IX - Teaching Staff

Name of teacher	Sex		Educational Level	Training			No. of years of experience	Subject(s) taught	Grade & Section	No. of periods taught per week
	M	F		Teacher Training Institute	on the job	untrained				

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X Teaching premises shift (if any) 1st shift from _____ to _____ No. of Sect. concern

a) General classrooms 2nd shift from _____ to _____ No. of sect.concerna

Classroom Number	Grade and sections concerned	ROOMS			Building materials		State (1)			
		Length (m)	Width (m)	Area (m^2)	Walls	Roofs	Very bad	Bad	Regular	Good
1										
2										
3										
4										
5										
6										
7										

1) Very bad = need reconstruction; Bad = need heavy repair;
Regular = need normal maintenance and Good = need no repair

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B) Other premises

Specialized classrooms	Number	Area in (m^2)			Building materials		State			
		Length (m)	Width (m)	Surface (m^2)	Walls	Roofs	Very bad	Bad	Regular	Good
Laboratory										
Workshop										
Home Economics										
Art										
Library										
Headmaster's Office										
Teachers' Office										
Storage Room										
Others (specify)										

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XI. Services available in the school

Item	Yes	No	Specify
Water			
Electricity			
Latrines			
First Aid Box			
Field Sports			
Land available for expansion			
Other (specify)			

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XII. Equipment available

a) General classrooms equipment

Grade and Section number		Classroom number	Availability of				Maps		Science		English	
			Blackboard		Teacher's desk		Sufficient	Insufficient	Sufficient	Insufficient	Sufficient	Insufficient
			Yes	No	Yes	No						
I	1											
	2											
	3											
II	1											
	2											
	3											
III	1											
	2											
	3											

(b) Specialized Classrooms equipment

Specialized Classroom	Equipment		Specify
	Sufficient	Insufficient	
Laboratory			
Workshop			
Home Economics			
Art			